ANNUAL SUMMARY, 1895.

INTRODUCTION.

The present annual summary completes the discussion of the meteorology of India for the year 1895.

It should be noted that in the monthly reviews it is attempted to present the facts and data from two different points of view. Meteorological data in India are chiefly utilized for the following purposes:—

1st.—In the discussion of the prevalence and spread of diseases, more especially of cholera and other diseases of an epidemic character.

2nd.—In connection with agricultural questions, more especially the progress and character of the crops as determined by the weather conditions of the period.

India has hence been divided into two groups of divisions from what may be termed the medical and agricultural stand-points. For the comparison of medical and meteorological statistics, India is arranged into the following provinces, which are believed to be fairly homogeneous so far as the conditions of the prevalence of the more common diseases are concerned:—

(1) Burma Coast and Bay Islands.
(2) Burma Inland.
(3) Assam.
(4) Bengal and Orissa.
(5) Gangetic Plain and Chota Nagpur.
(6) Upper Sub-Himalayas, including the submontane districts of the North-Western Provinces and the Punjab, and the North and Central Punjab.
(7) Indus Valley and North-West Rajputana.
(8) East Rajputana, Central India and Gujarat.
(9) Deccan.
(10) West Coast.
(11) South India.

The data for each of these divisions are given in Table I in larger figures, and the portion of each monthly review entitled "Summary of the chief features of the weather in India during the month" is intended to give a sketch of the broader and more important features of the weather in India for the use of those who study the relations between the prevalence and spread of diseases and the weather conditions prevailing at the time in India.

According to the second method of arrangement into meteorological divisions, India is divided into 51 meteorological districts, or divisions, or areas from the agricultural stand-point, each of which is fairly homogeneous so far as the distribution of rainfall and the general character of the crops and the conditions of their growth are concerned. The following gives the two series of divisions arranged under the respective political areas or provinces to which they belong:—

Political Division or Province.	Meteorological Division or District.	Meteorological Province.
BURMA	Tenasserim	Burma Coast and Bay Islands.
	Lower Burma	
	Arakan	
	Central Burma	Burma Inland.
	Upper Burma	
ASSAM	Assam (Surma)	Assam.
	,, (Brahmaputra)	
BENGAL	East Bengal	Bengal and Orissa.
	Deltaic Bengal	
	Central Bengal	
	North Bengal	
	Orissa	
	Chota Nagpur	Gangetic Plain and Chota Nagpur.
	Bihar, South	
	,, North	
NORTH-WESTERN PROVINCES and OUDH.	North-Western Provinces, East	
	Do do., Central.	
	Oudh, South	
	,, North	
	North-Western Provinces, Submontane	Upper Sub-Himalayas.
PUNJAB	Punjab, Central	
	,, Submontane	
	,, North-West	
	,, Hills	
	,, West	Indus Valley and North-West Rajputana.
	,, South	
BOMBAY, NORTH	Sind and Cutch	
RAJPUTANA and CENTRAL INDIA.	Rajputana, West	East Rajputana, Central India and Gujarat.
	,, East, and Central India, West.	
	Central India, East	
BOMBAY, NORTH	Kathiawar	
	Gujarat	
NORTH-WESTERN PROVINCES.	North-Western Provinces, West	
BOMBAY	Bombay Deccan	Deccan.
	Khandesh	
BERAR	Berar	
CENTRAL PROVINCES.	Central Provinces, West	
	,, ,, Central	
	,, ,, East	

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Political Division or Province.	Meteorological Division or District.	Meteorological Province.
HYDERABAD OR THE NIZAM'S DOMINIONS.	Hyderabad, North	Deccan.
	,, South	
BOMBAY	Konkan	West Coast.
	Malabar	
MADRAS	Madras, South	South India.
	,, South Central	
	,, East Coast, South	
	,, Central	
	,, East Coast, Central.	
	,, ditto North	
COORG AND MYSORE	Coorg	
	Mysore	

The double grouping is shown in Plate I at the end of this part.

The data of Table I in the monthly reviews and in the present annual part are obtained, with a few exceptions, from the observations telegraphed daily to Simla for publication in the Daily Weather Report. In the case of thermometric observations, they are telegraphed to the nearest half degree. Hence the maximum and minimum temperature data of the second class observatories derived from these telegraphic reports and given in that table occasionally differ to some slight extent from the means of the more exact data (recorded to tenths of a degree) tabulated in the observation forms sent into the Calcutta Office, and which are used in the calculation of the mean temperature data in Table II. There is also another reason why the mean maximum and minimum data in Tables I and II differ to a slight extent. In Table I the daily or 24-hours period is assumed to end at 8 A.M., and in Table II at 4 P.M., and hence the maximum temperature in Table I for any month of thirty-one days at any station gives the mean for thirty-one periods of 24 hours ending at 8 A.M. of the 31st, and in Table II for the same number of 24-hours periods ending at 4 P.M. on the 31st, and hence virtually of a monthly period one day in advance of the former. Similarly for months of 28, 29, or 30 days. These remarks will explain some of the slight discrepancies which may be found between the mean maxima and minima temperature data in Tables I and II, and hence also in the monthly mean variation data given in these tables in the monthly reviews and annual summary.

The methods of exposure of the instruments at observatories in India, and of the reducion of the observations and the calculation of mean data, have been fully stated and explained in the Annual Reports on the Meteorology of India, and need not be repeated. The reader is referred more especially to the Annual Report of the year 1885 and to the "Instructions to Observers of the Indian Meteorological Department" recently issued for full information on this subject.

Temperature.

The methods of exposing the thermometer at observatories in India and of deducing the daily and monthly means from the observed readings of the instruments are described in pages 18-19 of the Annual Report for 1890.

The variations of the mean temperature of each month from the normal given in Table II of the monthly reviews are deduced by a comparison of the actual monthly means with the normal monthly means obtained by the same methods given in Table XII of average monthly temperatures of 87 stations in India and Ceylon, etc., in pages 19 to 22 of the Annual Report for the year 1890. Average data for 134 stations will also be found in pages 39 to 42 of the Annual Report for the year 1887.

In Table I published in each monthly review, as in the Daily Weather Report, the mean temperature of the day is calculated by the formula, daily mean $= \frac{\text{maximum}+\text{minimum}}{2}$. It differs from the true daily mean by amounts varying slightly with the season. The variations of the daily or monthly means obtained by this method from normal daily or monthly means similarly calculated, usually differ very little from those obtained by the more laborious computation of true daily means and the comparison of these with normal true daily means. In Table I the variations of the monthly mean maximum and minimum temperatures from the normal as well as the variations of the monthly mean temperature (*i.e.*, $\frac{\text{maximum}+\text{minimum}}{2}$) are given.

Normal monthly mean maximum and minimum temperatures of 94 stations calculated from the observations of the eleven years period, 1878—1888, were given in the Annual Summary for 1891. The additional data for the years 1889-93 have been recently utilized to furnish what are probably slightly more accurate means than those given in the 1891 Annual Summary. The re-calculated means were given in the 1894 Annual Summary, Tables I and II, and need not be repeated here.

The following table gives summaries of the temperature variation data for each month of the year 1895 and for the year. In the first table (Table I) the same division has been adopted as that employed in the Annual Reports from 1881, to 1890 and thus enables an exact comparison to be made of the temperature data of the year 1895 with those of previous years given in the Annual Reports. In the second set of tables [Tables

II (*a*), II (*b*), and II (*c*)] the variation data are given for the eleven divisions or meteorological provinces into which the empire is divided for the purpose chiefly of comparing meteorological and health statistics and in the last table (Table III) the data are given for 48 of the 51 smaller divisions or areas into which India is sub-divided with a view to the comparison of meteorological and crop statistics:—

TABLE I.—*Geographical Summary of the temperature data of Table II in the 1895 monthly reviews.*

METEOROLOGICAL PROVINCE.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
North-West Himalayas	6—7	−2·8	−0·3	+0·5	−1·2	+5·7	−0·3	−0·6	−0·6	+0·1	−1·3	+1·4	−1·6	−0·1
Sikkim Himalaya and Nepal.	2	0	+0·3	−1·9	−1·9	+2·8	−0·4	−1·3	−0·9	−0·1	−3·1	+0·3	−1·3	−0·6
Punjab Plains . .	4	−0·4	+4·3	+1·3	+1·5	+7·0	−0·2	+1·7	−0·2	+1·6	+1·1	+4·0	+2·1	+2·0
Gangetic Plain .	8—9	−0·6	+0·7	−0·1	−2·8	+2·8	−2·4	−0·4	−0·6	+0·6	−0·8	+2·8	−0·3	−0·1
Western Rajputana .	3	−2·4	+1·9	−0·5	+1·9	+1·8	+0·2	+1·9	+0·3	+0·9	+1·1	+3·3	+1·5	+1·0
Eastern Rajputana and Central India.	4—5	0	+1·8	−1·2	−0·3	+4·0	−1·5	+2·0	+0·3	+1·3	+0·4	+4·8	+0·3	+1·0
Nerbudda Valley .	3	+0·8	+0·2	−1·3	−1·1	+1·8	−1·2	+1·4	+0·4	+0·7	−0·2	+3·8	−0·3	+0·4
Chota Nagpur . .	1	+0·4	−0·4	−0·4	−3·0	+2·0	−0·2	0	+0·4	+1·9	+0·5	+2·7	−0·6	+0·3
Lower Bengal . .	5	+0·1	−0·7	−0·5	−2·6	+1·7	−0·5	+0·4	+0·1	+1·2	−1·1	+1·6	−0·5	−0·1
Assam and Cachar .	3	+1·3	+0·6	−0·3	−0·7	+1·7	+1·9	−1·6	−0·4	+0·3	−1·9	+1·0	+0·1	+0·2
Orissa . . .	2	+0·5	0	−0·5	−1·8	+1·8	−1·2	+1·0	−0·3	+1·0	−0·4	+1·6	−1·4	0
Central Provinces (South) and Berar .	4—5	+1·5	−0·4	−0·7	−1·5	+1·4	0	+1·2	+0·4	+0·8	+0·5	+3·6	+0·1	+0·5
Konkan . . .	3	−0·5	+0·2	+0·3	−0·1	+0·4	+1·7	−0·1	+0·4	+0·2	+0·9	+1·9	+0·4	+0·5
Malabar Coast . .	1	+1·8	+1·4	+1·6	−0·1	+1·3	+1·8	−0·8	0	+0·9	+0·6	+1·9	+0·8	+0·9
Deccan, Hyderabad and Mysore.	5—6	+1·5	+0·2	+0·5	−1·7	+0·5	+0·9	−0·1	−0·3	−0·1	+0·1	+0·7	−0·7	+0·1
East Coast and Carnatic	3—4	+0·6	+0·1	−0·8	−0·7	+1·2	+0·8	−0·9	0	+0·1	−0·9	+0·4	−0·1	0
Arakan and Pegu .	3—5	+1·3	+0·1	+0·2	−0·4	0	+1·2	+1·3	+0·4	+1·0	+0·2	−0·9	+0·8	+0·4
Bay Islands . .	1	+0·4	−0·5	+0·8	+0·2	+0·1	+0·6	+0·7	−0·1	0	+2·2	+1·3	+1·2	+0·6
Extra Tropical India .	40—42	−0·6	+0·8	−0·3	−1·2	+3·4	−0·7	+0·4	−0·2	+0·8	−0·5	+2·6	−0·1	+0·4
Tropical India . .	25—27	+1·0	+0·1	0	−0·9	+0·8	+0·7	+0·3	+0·1	+0·4	+0·2	+1·3	0	+0·3
Whole India . .	65—69	0	+0·6	−0·2	−1·1	+2·4	−0·2	+0·3	−0·1	+0·7	−0·2	+2·1	−0·1	+0·4

TABLE II(*a*).—*Variations of the mean monthly maximum temperature from the normal in 1895 in the eleven Meteorological Provinces of India.*

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma Coast and Bay Islands .	+0·6	−0·3	−0·1	−0·9	−1·5	+0·9	+1·6	0	+0·9	+0·8	−0·2	+0·6	+0·2
Burma Inland . . .	+1·4	−0·7	−1·2	−3·4	−4·9	+0·2	+1·2	−0·4	−0·5	−0·9	−1·5	−2·0	−1·2
Assam	−0·2	+1·5	−0·4	−0·4	+1·3	+2·6	−2·2	−1·0	−0·4	−1·7	+0·9	+0·5	0

TABLE II(*a*).—*Variations of the mean monthly maximum temperature from the normal in 1895 in the eleven Meteorological Provinces of India*—concld.

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Bengal and Orissa . .	−0·5	+0·2	+0·2	−2·4	+0·8	+0·3	+0·4	+0·1	+1·4	−0·7	+1·6	+0·3	+0·2
Gangetic Plain and Chota Nagpur.	−0·8	−0·5	−1·6	−4·9	+0·7	−1·0	+0·3	0	+1·5	+0·5	+3·3	+0·5	−0·2
Upper Sub-Himalayas . .	−4·1	+1·3	−0·4	−3·4	+4·5	−4·9	+1·0	−0·7	+2·4	+0·8	+2·9	+1·0	0
Indus Valley and North-West Rajputana.	−3·1	+4·7	−0·1	+1·2	+4·8	−0·2	+2·3	+0·2	+1·7	+0·9	+3·0	+1·4	+1·4
East Rajputana, Central India and Gujarat.	−3·4	+1·1	−1·2	−1·6	+2·1	−1·6	+3·0	−0·1	+3·0	+0·9	+5·1	+0·8	+0·7
Deccan	0	−1·7	−1·7	−2·8	+1·6	−0·3	+2·3	+0·1	+1·5	+0·8	+4·5	+0·8	+0·4
West Coast	−0·7	+0·2	+0·6	+0·1	+0·6	+2·5	−0·7	+0·4	+0·4	+1·0	+2·1	+1·0	+0·6
South India	+0·6	−0·2	−0·3	−1·8	+1·3	+0·8	−1·0	−0·4	−0·1	−1·1	+1·7	+0·3	0

TABLE II(*b*).—*Variations of the mean monthly minimum temperature from the normal in 1895 in the eleven Meteorological Provinces of India.*

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma Coast and Bay Islands.	−0·1	+0·1	+0·3	+0·9	+0·6	+1·0	+1·3	+0·4	+1·1	+0 8	−2·1	+2·4	+0·6
Burma Inland . . .	−1·9	−0·4	+0·2	+1·1	+0·7	+0 8	+0·9	+0·5	+0·9	−0·1	−1·6	+2·2	+0·4
Assam	+2·1	−0·3	0	−1·0	+1·8	+0·7	−1·0	−0·2	0	−2·9	+0·5	−1·3	−0·1
Bengal and Orissa . .	+0·6	−0·3	−0·5	−1·9	+1·8	−0·1	+0·4	+0·2	+0·8	−1·9	+1·4	−1·3	−0·1
Gangetic Plain and Chota Nagpur.	+1·9	+0·8	+0·2	−2·0	+2·9	−0·3	−0·4	−0·1	+0·1	−2·3	+2·5	−1·0	+0·2
Upper Sub-Himalayas . .	+1·0	+2·1	+1·5	−0·7	+4·4	−0 6	−0·2	0	+0·4	−1·0	+4·8	+0·2	+1·0
Indus Valley and North-West Rajputana.	−1·7	+1·7	+0·9	+1·1	+3·0	+1·2	+0·7	+0·1	−0·9	−0·6	+4·6	+1·7	+0·9
East Rajputana, Central India, and Gujarat.	+0·7	+0 9	+0·1	+0·1	+2·6	−0·7	+0·8	0	+0·4	−1·3	+4·6	+0·9	+0·8
Deccan	+2·5	+1·7	+0·1	−1·2	+1·9	+0·4	+0·8	+0 1	+0·7	−0·4	+1·9	−0·4	+0·7
West Coast	+0·7	+0·5	+0·7	−0·3	+1·3	+2·2	+0·1	+0·6	+0·8	+0·9	+1·3	−0·4	+0·7
South India	+1·0	+0·8	−0·9	−0·9	+0·6	+1·0	−0·3	−0·1	+0·3	+0·1	+0·5	−1·0	+0·1

TABLE II (*c*).—*Variations of the mean monthly temperature from the normal in 1895 in the eleven Meteorological Provinces of India.*

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°		°	°	°		°	°	°
Burma Coast and Bay Islands	+0·3	−0·1	+0·1	+0·1	−0·5	+1·0	+1·5	+0·2	+1·0	+0·8	−1·2	+1·5	+0·4
Burma Inland . . .	−0·3	−0 6	−0·5	−1·2	−2·1	+0·5	+1·0	+0·1	+0·3	−0·5	−1·6	+0·1	−0·4
Assam	+1·0	+0·6	−0·2	−0·7	+1·5	+1·7	−1·6	−0·6	−0·2	−2·3	+0·7	−0·4	0

TABLE II (*c*).—*Variations of the mean monthly temperature from the normal in 1895 in the eleven Meteorological Provinces of India*—concld.

Meteorological Province.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Bengal and Orissa . .	+0·1	−0·1	−0·1	−2·2	+1·3	+0·1	+0·4	+0·2	+1·1	−1·3	+1·6	−0·5	+0·1
Gangetic Plain and Chota Nagpur.	+0·6	+0·2	−0·7	−3·5	+1·8	−0·7	0	+0·1	+0·8	−1·0	+2·9	−0·3	0
Upper Sub-Himalayas . .	−1·6	+1·7	+0·6	−2·1	+4·4	−2·8	+0·4	−0·4	+1·4	−0·1	+3·9	+0·6	+0·5
Indus Valley and North-West Rajputana.	−2·5	+3·2	+0·4	+1·2	+3·9	+0·5	+1·4	+0·1	+0·4	+0·2	+3·6	+1·6	+1·2
East Rajputana, Central India, and Gujarat.	−1·4	+1·0	−0·5	−0·7	+2·4	−1·2	+1·9	0	+1·7	−0·2	+4·9	+0·8	+0·7
Deccan . . .	+1·2	0	−0·8	−2·0	+1·7	0	+1·5	+0·1	+1·1	+0·2	+3·2	+0·2	+0·5
West Coast	0	+0·4	+0·6	−0·1	+1·0	+2·4	−0·3	+0·5	+0·6	+1·0	+1·7	+0·3	+0·7
South India	+0·8	+0·3	−0·6	−1·4	+1·0	+1·0	−0·7	−0·3	+0·1	−0·5	+1·1	−0·3	0

TABLE III.—*Variations of the mean monthly and annual temperature from the normal in 1895 in 48 of the 52 Meteorological Districts or Divisions of India.*

Province.	Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mean variation of year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Burma . .	Tenasserim . . .	+0·1	−0·2	+0·4	+0·5	−0·8	+1·0	+1·8	+0·3	+1·1	+0·9	−0·9	+2·0	+0·5
	Lower Burma . . .	+0·9	+0·3	+0·2	+0·1	−0·4	+1·0	+1·2	+0·3	+1·2	+1·4	−1·2	+1·8	+0·6
	Central do. . . .	−0·3	−0·7	−0·5	−0·9	−1·9	+0·9	+1·6	+0·8	+1·0	−0·1	−0·8	+0·7	0
	Upper do. . . .	?	−0·4	?	−1·5	−2·3	+0·2	+0·4	−0·7	−0·5	?	−2·3	−0·5	−0·8
	Arakan	−1·2	−1·1	−0·9	−1·1	+0·1	+0·4	+1·5	+0·1	+0·4	−1·4	−1·9	+0·1	−0·4
Bengal and Assam.	Eastern Bengal . .	+0·1	−0·2	+0·4	−1·2	+0·7	+1·0	+0·7	+0·3	+0·9	−1·7	+0·9	−0·4	+0·1
	Assam (Surma) . .	+0·9	+0·6	+0·8	−0·3	+1·2	+2·1	−0·8	+0·4	+0·2	−2·6	+0·2	−0·3	+0·2
	Do. (Brahmaputra) .	+1·0	+0·7	−0·7	−0·9	+1·7	+1·5	−2·1	−1·1	−0·4	−2·2	+1·0	−0·5	−0·2
	Deltaic Bengal . .	−0·4	−0·8	−0·5	−2·5	+1·4	−0·7	+0·8	0	+1·4	−1·3	+1·5	−0·7	−0·2
	Central do. . . .	−0·2	−0·5	−0·5	−3·1	+1·7	+0·1	+0·2	+0·5	+1·1	−1·3	+2·0	−0·6	−0·1
	North do. . . .	+0·1	+1·8	+0·8	−1·1	+1·0	+1·7	−0·9	+0·4	+0·9	−1·3	+1·8	−0·1	+0·4
	Orissa	+0·7	+0·1	−0·6	−2·9	+1·7	−1·3	+0·7	−0·2	+1·4	−0·6	+1·9	−0·9	0
	Chota Nagpur . . .	+0·8	+0·3	−0·8	−3·9	+2·1	−0·9	+0·7	+0·6	+1·9	−0·3	+3·0	−0·3	+0·3
	Bihar (South) . . .	+0·9	−0·2	−0·5	−3·1	+1·9	+0·3	0	−0·2	+0·4	−0·7	+3·3	−0·2	+0·2
	Do. (North) . . .	+0·5	+0·7	+0·2	−2·2	+0·6	+1·8	−0·4	+0·2	+0·9	−1·4	+2·1	−0·9	+0·2
North-Western Provinces and Oudh.	North-Western Provinces (East).	+0·4	+0·1	−1·1	−3·8	+1·5	−2·1	−0·2	−0·3	+0·3	−1·4	+3·1	−0·2	−0·3
	Oudh (South) . . .	−0·6	−0·4	−1·5	−4·4	+3·9	−2·3	−1·0	−0·6	0	−1·2	+3·3	+0·7	−0·3
	North-Western Provinces (West).	−1·8	+1·6	−0·1	−2·5	+3·5	−3·6	+2·0	+0·4	+2·1	+1·0	+5·7	+0·6	+0·7
	North-Western Provinces (Submontane).	−0·8	+1·0	+0·3	−2·9	+3·2	−3·8	−0·3	−0·6	+0·7	−0·8	+3·4	+0·4	0

TABLE III.—*Variations of the mean monthly and annual temperature from the normal in 1895 in 48 of the 52 Meteorological Districts or Divisions of India*—concld.

Province.	Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mean variation of year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Punjab	Punjab (South)	−2·4	+2·4	+1·6	−2·0	+5·2	−2·8	+1·8	+0·9	+3·1	+1·0	+4·5	+1·0	+1·2
	Do. (Central)	−1·6	+3·3	+1·8	−0·1	+7·1	+0·3	+3·2	+0·5	+3·1	+1·3	+5·2	+1·1	+2·1
	Do. (Submontane)	−1·9	+1·9	−0·4	−1·7	+5·0	−3·4	−0·5	−1·0	+1·3	−0·4	+4·1	+0·9	+0·3
	Do. (Hill Districts)	−3·1	+3·5	+0·5	−1·1	+6·4	−2·4	−0·6	−0·5	+0·6	−1·0	+2·4	−0·6	+0·3
	Do. (North-West)	−2·1	+2·9	+0·9	−0·5	+6·4	−0·7	+0·3	−0·3	+1·2	−0·1	+4·1	+0·8	+1·1
	Do. (West)	−1·5	+4·4	+1·0	+2·2	+6·3	+0·5	+0·6	−1·3	−0·4	−0·7	+2·7	+1·8	+1·3
Bombay and Malabar Coast Districts (Madras).	Malabar	+1·3	+0·6	+1·1	−0·1	+1·2	+2·8	−0·9	+0·5	+0·8	+0·9	+1·6	+0·2	+0·8
	Madras (South Central)	+1·4	+0·3	+0·1	−1·5	+0·6	+2·6	−1·2	+0·5	+0·7	−0·2	+0·8	−0·2	+0·3
	Coorg	+1·7	+1·1	+0·3	−1·5	−0·4	+2·1	−0·9	−0·3	+0·5	+0·7	+1·1	−0·3	+0·3
	Mysore	+1·5	+0·2	+0·2	−1·4	0	+1·4	−0·8	−0·2	+0·7	−0·1	+1·0	−0·1	+0·2
	Konkan	−0·8	+0·2	+0·3	−0·1	+0·6	+2·0	+0·3	+0·7	+0·4	+1·0	+1·9	+0·5	+0·6
	Bombay Deccan	+1·4	−0·4	+0·6	−1·0	+0·8	+1·5	+0·7	−0·2	−0·2	+0·3	+0·6	−0·4	+0·3
	Khandesh	+1·2	−0·7	+1·1	−0·5	+1·6	+0·1	+1·6	+0·7	+0·5	−0·8	+3·5	+0·6	+0·7
Central Provinces and Berar.	Berar	+1·9	−0·1	+0·1	−1·2	+1·4	+0·4	+2·1	+0·5	+1·6	+1·4	+3·9	+1·0	+1·1
	Central Provinces (West)	+0·6	−0·3	−1·2	−1·7	+1·6	−0·3	+1·7	+0·2	+1·0	−0·3	+4·1	+0·9	+0·5
	Ditto (Central)	+1·3	+0·2	−2·0	−2·8	+2·5	−0·8	+1·7	+0·3	+1·7	+0·2	+4·2	+0·5	+0·6
	Ditto (East)	+1·8	+0·1	−1·7	−3·5	+1·8	−0·7	+1·4	−0·6	+1·9	+0·1	+3·8	−0·3	+0·3
Bombay (North)	Gujarat	−1·4	−0·4	+0·4	−0·7	−0·5	−0·3	+0·4	+0·2	+1·0	−0·9	+2·6	+1·2	+0·1
	Kathiawar	−2·9	−1·0	−1·6	−0·4	−0·1	−0·8	+0·6	0	+0·6	−1·2	+4·2	+0·5	−0·2
	Sind	−3·2	+2·0	−0·4	+1·5	+1·2	+1·1	+2·0	+0·3	−0·3	+0·5	+3·7	+1·8	+0·9
Rajputana and Central India.	Central India (East)	+1·2	+0·7	−1·7	−2·8	+3·3	−2·7	+1·4	+0·7	+1·7	+0·2	+5·3	+0·6	+0·7
	Rajputana (East) Central India (West).	−1·2	+1·5	−0·5	+0·2	+2·9	0	+2·6	−0·2	+2·0	−0·5	+5·0	+0·8	+1·1
	Rajputana (West)	−3·4	+3·5	−0·3	+0·2	+4·4	−0·1	?	+1·3	+1·5	0	?	?	+0·8
Madras	East Coast (North)	+0·1	+0·4	−1·0	−2·1	+1·5	−1·4	−0·1	−0·8	+0·1	−0·4	+1·7	−0·2	−0·2
	Hyderabad (South)	+1·3	+0·2	−1·4	−2·9	+1·6	+1·9	+1·7	−1·4	+0·5	+0·5	+0·9	−1·1	+0·2
	Madras (Central)	+0·6	−0·1	−0·7	−2·5	+0·2	+1·2	−0·9	−0·2	−0·3	−0·7	+1·2	−1·3	−0·3
	East Coast (Central)	0	+0·3	−1·5	−0·3	+1·5	−0·1	−1·0	−1·3	−0·6	−0·8	+1·4	−0·3	−0·2
	Ditto (South)	+0·9	+0·7	−0·8	+0·2	+2·0	+1·9	−0·4	0	+0·2	−0·7	+1·0	+0·1	+0·4
	Madras (South)	−0·2	−0·6	−0·5	−1·2	+1·0	+0·5	−0·5	−0·4	−0·7	−1·6	+0·8	+0·2	−0·3

In the following discussion of the meteorology of India during the year 1895, the year is divided into four seasons according to the following arrangement:—

1st.—The cold weather period, including the months of January and February.

2nd.—The hot weather period, including the months of March, April and May.

3rd.—The period of the south-west monsoon rains proper, including the months of June, July, August and September.

4th.—The period of the retreating south-west monsoon, including the months of October, November and December.

The following gives a *résumé* of the chief features of the temperature conditions during the year:—

I.—***The cold weather period.***—The weather was more disturbed than usual in Northern India during the month of January. Four depressions advanced across Northern India during the month. Two of these storms were of moderate intensity and gave heavy falls of snow in the Kashmir and Punjab Himalayas. The snow did not fall to as low elevations as is usually the case and much rain fell with the snow at elevations of from 6,000 feet to 10,000 feet. The accumulation of snow was hence not large in amount except at elevations above 10,000 feet. The precipitation of the month was in slight to moderate excess in North-Western and Central India. It was small and below the normal in Bengal, Assam, Burma and the Peninsula.

Each of the storms was preceded by a warm wave and followed by a cool wave. These waves advanced across Northern India, but in consequence of the character of the storms, the temperature changes were not so large and rapid as is frequently the case in January. The character of the weather changed completely in February and fine settled weather prevailed throughout the whole month. Temperature was hence as generally above the normal in February as it was below it in January. The following gives a summary of the chief features of the temperature conditions of the period:—

1st.—The mean maximum or day temperature was considerably below the normal in North-Western and Central India during the month of January and normal or above it during the month of February, as is shown by the following data:—

Area.	Variation of mean maximum temperature from normal in—		
	January 1895.	February 1895.	Cold weather period of January and February 1895.
	°	°	°
Baluchistan (Quetta)	−7·1	+7·8	+0·4
Sind	−3·4	+4·6	+0·6
Punjab	−3·7	+3·3	−0·2
North-Western Provinces and Oudh.	−3·2	0	−1·6
Rajputana	−3·4	+3·4	0
Central India	−2·4	−0·1	−1·3

The mean of the period was hence normal or in slight excess in Upper India and Baluchistan, and in slight defect in the North-Western Provinces and Central India. Over the remainder of India the mean day temperature was generally in slight excess.

2nd.—The mean minimum or night temperature was normal or in slight excess in North-Western India in January and in general excess in February (except in Burma, Assam, Bengal and Orissa), but to a less extent than the maximum temperature:—

Area.	Variation from normal of mean minimum temperature in—		
	January 1895.	February 1895.	Cold weather period of January and February 1895.
	°	°	°
Punjab	−0·1	+2·8	+1·4
North-Western Provinces and Oudh.	+2·0	+1·3	+1·7
Rajputana	−0·8	+0·4	−0·2
Central India	+2·6	+2·1	+2·4
Bihar and Chota Nagpur	+1·5	+0·7	+1·1
Bengal and Orissa	+0·6	−0·3	+0·2
Assam	+2·1	−0·3	+0·9
Berar and Central Provinces	+2·8	+1·8	+2·3
Madras	+1·2	+0·9	+1·1
Bombay	+0·6	+0·3	+0·5
Burma	−0·3	−0·1	−0·2

3rd.—The mean daily temperature of the period varied very slightly from the normal, but was generally in excess, as is shown by the following data:—

Province.	Variation from normal of mean daily temperature in—		
	January 1895.	February 1895.	Cold weather period of January and February 1895.
	°	°	°
Punjab	−1·9	+3·2	+0·7
North-Western Provinces and Oudh.	−0·6	+0·7	+0·1
Rajputana	−2·1	+2·0	−0·1
Central India	+0·1	+1·0	+0·6
Bihar and Chota Nagpur	+0·8	+0·3	+0·6
Bengal and Orissa	+0·1	−0·1	0
Assam	+1·0	+0·6	+0·8
Berar	+1·9	−0·1	+0·9
Central Provinces	+1·2	+0·2	+0·7
Bombay	−0·1	−0·3	−0·2
Madras	+1·0	+0·3	+0·7
Burma	+0·2	−0·2	0

4th.—Temperature was largely in defect at the hill stations in Northern India in January and in

moderate excess in February. It was, on the other hand, in large defect in February at the elevated stations of Leh and Kailang. The following gives variation data of eight representative hill stations for the period :—

Hill Station.	Variation from normal of mean temperature in—		
	January 1895.	February 1895.	Cold weather period of January and February 1895.
	°	°	°
Quetta	−5·4	+4·2	−0·6
Murree	−3·2	+5·3	+1·1
Chakrata	−3·1	+1·7	−0·7
Mount Abu	−3·0	+0·9	−1·1
Darjeeling	0	+1·9	+1·0
Pachmarhi	+2·1	+0·7	+1·4
Leh	−0·9	−8·3	−4·6
Kailang	−5·7	−3·3	−4·5

In the plains of Northern India the lowest minimum temperatures were recorded in the great majority of cases during the period from the 11th to the 16th of January. These were by no means so low as are occasionally experienced in the cold weather, as is shown by the following table which gives the lowest night temperatures registered at eight representative stations in Northern India during the cold weather of 1895 and the lowest previously recorded temperatures for comparison :—

Station.	Lowest minimum temperature recorded in cold weather of 1895.	Lowest previously recorded.	Years.
	°	°	
Peshawar	31·9	28·8	1878 and 1880
Lahore	35·2	29·2	1889
Agra	41·4	36·3	1878
Sirsa	34·7	30·0	1878
Jeypore	38·7	34·8	1884
Jacobabad	31·5	29·0	1887
Allahabad	43·9	36·0	1878
Hazaribagh	43·0	37·5	1874

The variations of the mean temperature conditions of January from the normal were chiefly determined by the distribution and character of the rainfall of the month. Temperature was below the normal in North-Western and Central India and above it over the remainder of India. The variations were generally small to moderate in amount.

A large and important change in the distribution of pressure occurred in the first week of February, which was followed by very dry and fine weather. The only important storm of the month was a feeble depression which advanced across North-Western India during the first three days of the month.

Temperature hence increased with unusual rapidity during the month, more especially in North-Western India, and was in general excess. The excess was very pronounced from the 15th to the end of month in North-Western India and Baluchistan as is shown by the following variations of the day temperature from the normal at interval of three days from the 15th to the 27th :—

District or Province.	Variation from normal of maximum temperature of 24 hours preceding 8 A.M. of February				
	15th.	18th.	21st.	24th.	27th.
	°	°	°	°	°
Baluchistan (Quetta)	+12·3	+12·7	+13·9	+13·0	+12·0
Punjab	+6·5	+7·2	+9·7	+9·0	+6·0
Upper Sind	+10·2	+12·7	+13·1	+13·5	+11·3
Rajputana	+6·1	+9·7	+7·7	+7·9	+5·3

Very high maximum temperatures were recorded on the 27th and 28th in North-Western India, but they were not quite so high as were registered in the very dry and warm months of February 1878, 1886, 1887 and 1892.

Another noteworthy local feature of the temperature conditions of February 1895 was the abnormally low night temperature in the Madras Presidency, more especially the coast districts. This feature was very marked on the nights of the 17th, 27th and 28th. The low night temperature of this period was due to the abnormal dryness of the air and the prevalence of much lighter winds than usual blowing from the interior or dry plateaux of the Deccan and Mysore. The following gives data for the Madras observatory for these dates which indicate clearly the abnormal conditions of the period in the Coromandel coast districts :—

Date.	Variation from normal of—			Cloud. 8 A.M.	Wind direction. 8 A.M.	Percentage variation of mean wind velocity of day from normal
	Humidity.	Maximum temperature.	Minimum temperature.			
		°	°			
17th February	−8	−1·7	−4·8	3	Calm	−11
27th ,,	−3	+0·3	−3·7	3	WNW	−25
28th ,,	−15	+2·3	−3·0	3	WSW	−30

The winds were so abnormally light during these nights that the wind vane at the Madras observatory failed to record properly the direction of the very light airs which obtained. Mr. Michie Smith, Government Astronomer, Madras, when forwarding the data from which the results of the preceding table are derived states that "the chief cause of the low night temperature prevailing at Madras (and hence also at the other observatories in the Madras Presidency) was the great clearness of the air and lightnes of the winds at night. It is probable that the great clearness of the atmosphere was due to conditions in the higher strata and that it may have been a result of the great extension of snow-clad surface in Europe due to the severe winter weather of that month. There were very few upper clouds during the month, and on the few occasions on which they were observable they appeared to be moving much more northerly than usual."

II.—***The hot weather period:***—Weather was somewhat more disturbed than usual in March and April. Temperature was generally below the normal to a slight extent in March. It was in slight to considerable excess in April in Baluchistan, Sind, West Rajputana and the South-West Punjab, and was reduced below the normal to a considerable extent in the Deccan, the Central Provinces, North-Western Provinces, Bihar, Chota Nagpur and West Bengal. May was, on the other hand, an unusually hot month over the whole of India, but more especially in Upper India.

The following gives a summary of the chief temperature conditions of the period:—

(1) The mean day or maximum temperature was below the normal to a slight extent in March over nearly the whole of India, and below it to a considerable extent in April over the whole area except the west coast and frontier districts. The deficiency was most marked in the Gangetic Plain. Temperature was more or less in excess in May over the whole of India and in moderate defect in Burma. The following table gives comparative data of the variation of the mean maximum temperature of the period from the normal:—

Political Division.	Variation of mean maximum temperature from normal in—			
	March 1895.	April 1895.	May 1895.	Period March to May 1895.
	°	°	°	°
Punjab	−0·4	−1·2	+6·5	+1·6
North-Western Provinces and Oudh	−1·4	−4·7	+2·1	−1·3
Rajputana	−0·2	+0·2	+4·0	+1·3
Central India	−2·2	−2·7	+1·8	−1·0
Bihar and Chota Nagpur	−1·1	−4·6	+0·5	−1·7
Bengal and Orissa	+0·2	−2·4	+0·8	−0·5
Assam	−0·4	−0·4	+1·3	+0·2
Central Provinces	−2·5	−3·6	+2·0	−1·4
Bombay	−0·1	−0·6	+0·6	0
Madras	−0·2	−1·7	+1·6	−0·1
Burma	−0·3	−1·5	−2·4	−1·4

(2) The night temperature was in slight excess in March in Northern India and in slight defect over the greater part of India in April. It was, on the other hand, in slight to considerable excess in May. The following table gives comparative data for the larger political divisions:—

Political Division.	Variation of mean minimum temperature from normal in—			
	March 1895.	April 1895.	May 1895.	Period March to May 1895.
	°	°	°	°
Punjab	+2·2	+0·6	+5·4	+2·7
North-Western Provinces and Oudh	+0·6	−1·8	+3·5	+0·8
Rajputana	−0·5	+0·5	+3·0	+1·0
Central India	0	−0·2	+2·4	+0·7
Bihar and Chota Nagpur	+0·3	−1·9	+2·8	+0·4
Bengal and Orissa	−0·5	−1·9	+1·8	−0·2
Assam	0	−1·0	+1·8	+0·3
Central Provinces	−0·8	−1·6	+2·3	0
Bombay	+0·7	−0·5	+1·0	+0·4
Madras	−0·6	−0·8	+0·6	−0·3
Burma	+0·3	+1·0	+0·6	+0·6

(3) The mean temperature of the month of March was below the normal to a slight extent in Northern and Central India (excepting the Punjab, where it was in moderate excess) and the Deccan. It was normal in Burma and in slight excess in Malabar and the Konkan. It was in April more or less in defect over the whole of India with the exception of the Punjab and Rajputana. It was, on the other hand, in large excess in Upper India in May and in slight to moderate excess over the remainder of India. The excess averaged 0°·8 in Tropical India and 3·4° in Extra-tropical India. It was absolutely greatest in the Punjab where it averaged 6°, and the month of May was the hottest on record in that area. The following table

gives temperature variation data for the larger political divisions:—

Political Division.	Variation of mean daily temperature from normal in			
	March 1895.	April 1895.	May 1895.	Period March to May 1895.
	°	°	°	°
Punjab	+0·9	−0·3	+6·0	+2·2
North-Western Provinces and Oudh.	−0·4	−3·3	+2·8	−0·3
Rajputana	−0·4	+0·4	+3·5	+1·2
Central India	−1·1	−1·5	+2·1	−0·2
Bihar and Chota Nagpur	−0·4	−3·3	+1·7	−0·7
Bengal and Orissa	−0·2	−2·2	+1·3	−0·4
Assam	−0·2	−0·7	+1·5	+0·2
Central Provinces	−1·7	−2·6	+2·2	−0·7
Bombay	+0·3	−0·6	+0·8	+0·2
Madras	−0·4	−1·3	+1·1	−0·2
Burma	0	−0·3	−0·9	−0·4

One of the more noteworthy features of the meteorology of the year 1895 was the abnormally high temperature in the Punjab, Upper Sind and West Rajputana in May. Hotter weather than usual prevailed in that area without interruption during the month. The hottest period in Northern India was from the 18th to the 30th, and the highest temperatures of the year were recorded in North-Western India on the 24th and 25th.

The following gives the maximum temperature of the year at the hottest stations :—

Date.	Station.	Highest maximum 1895.	Variation from normal of day.	Highest previously recorded maximum temperature.	Year.
		°	°	°	
24th May.	Montgomery	121·9	?	118·9	1892
„ „	Sirsa	121·1	+15·3	118·3	1888
„ „	Mooltan	120·5	+16·0	120·3	1890
„ „	Bickaneer	118·3	+12·6	117·4	1879
25th „	Jacobabad	123·0	+11·0	123·0	1888

The absolute maximum of the year was 123°·0, registered at Jacobabad.

The maximum temperatures of the year at several stations in Upper India were higher than have been previously recorded, *e.g.* :—

Station.	Highest maximum 1895.	Date.	Highest previously recorded maximum temperature.	Year.
	°		°	
Montgomery	121·9	24th May 1895.	118·9	1892
Sirsa	121·1	Ditto.	118·3	1888
Mooltan	120·5	Ditto.	120·3	1890
Bickaneer	118·3	Ditto.	117·4	1879

The following gives the variations of the mean maximum, mean minimum and mean daily temperatures from the normal for every second day during the hottest period of the year 1895 from the 20th to the 30th May, in Northern and Central India :—

Political Division.	Variation from normal of mean maximum temperature of 24 hours preceding 8 A.M. of					
	20th May 1895.	22nd May 1895.	24th May 1895.	26th May 1895.	28th May 1895.	30th May 1895.
	°	°	°	°	°	°
Bihar	+2·9	+4·6	−0·2	−2·3	+8·9	−0·3
Chota Nagpur	+2·7	+6·2	+3·4	+10·3	+13·2	+9·1
North-Western Provinces.	+1·9	+7·6	+3·1	+4·1	+8·9	+3·6
Punjab	+2·9	+9·7	+12·3	+7·5	+9·2	+4·0
Sind	−0·7	+3·1	+0·7	+3·1	+1·5	−0·6
Rajputana	−0·1	+4·8	+9·5	+7·2	+5·3	−0·5
Central India	−1·5	+2·8	+6·2	+5·7	+2·6	−1·5

Political Division.	Variation from normal of mean minimum temperature of 24 hours preceding 8 A.M. of					
	20th May 1895.	22nd May 1895.	24th May 1895.	26th May 1895.	28th May 1895.	30th May 1895.
	°	°	°	°	°	°
Bihar	+4·5	+7·0	+3·4	0	+6·3	+1·0
Chota Nagpur	+5·8	+9·3	+2·8	+6·4	+10·2	+7·3
North-Western Provinces.	+3·8	+6·3	+4·6	+4·9	+6·8	+4·9
Punjab	+5·8	+4·9	+8·2	+2·6	+5·0	+4·4
Sind	+2·6	+2·8	+0·5	0	+0·5	+0·7
Rajputana	+4·1	+7·8	+8·9	+6·8	+1·6	−0·5
Central India	+3·1	+6·0	+5·3	+3·8	+3·2	+1·0

Political Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	20th May 1895.	22nd May 1895.	24th May 1895.	26th May 1895.	28th May 1895.	30th May 1895.
	°	°	°	°	°	°
Bihar . . .	+3·7	+5·8	+1·6	—1·2	+7·6	+0·4
Chota Nagpur . .	+4·3	+7·8	+3·1	+8·4	+11·7	+8·2
North-Western Provinces.	+2·9	+7·0	+3·9	+4·5	+7·9	+4·3
Punjab . . .	+4·4	+7·3	+10·3	+5·1	+7·1	+4·2
Sind . . .	+1·0	+3·0	+0·6	+1·6	+1·0	+0·1
Rajputana . . .	+2·0	+6·3	+9·2	+7·0	+3·5	—0·5
Central India . .	+0·8	+4·4	+5·8	+4·8	+2·9	—0·3

It may be noted that several of the features of this hot weather period resemble those of the corresponding period in May 1894. A noteworthy feature was the intensity of the heat in West Bengal, Bihar, the North-Western Provinces and Chota Nagpur during the last week of the month, but the temperatures recorded were not quite so high as in May 1894. The following gives examples :—

Station.	Maximum temperature recorded during the period 27th to 30th May.	
	1895.	1894.
	°	°
Patna	110·0	114·1
Chaibassa	115·7	117·8
Bankura	116·1	117·1
Midnapur	115·4	117·4
Balasore	116·0?	111·0
Sambalpur	115·0	116·5

The chief feature of the hot weather of the year 1895 was its intensity in the Punjab, West Rajputana and Upper Sind.

A remarkable feature of the temperature conditions of the period was the unusually low night temperature in Madras during the first fortnight of March. The following gives variation data for three stations, *viz.*, Madras, Bellary and Trichinopoly :—

Date.	Variation from normal of minimum temperature of 24 hours preceding 8 A.M. of date at		
	Madras.	Bellary.	Trichinopoly.
1895.	°	°	°
1st March	—5·8	+0·4	—5·0
2nd ,, ...	—4·5	—3·2	—4·5
3rd ,, ...	—6·2	—3·0	—4·0
4th ,, ...	—5·8	—5·4	—4·9
5th ,, ...	—4·0	—0·9	—1·2
6th ,, ...	—0·7	—3·7	—1·0
7th ,, ...	—0·9	—3·7	—1·3
8th ,, ...	—1·5	—0·1	+2·2
9th ,, ...	+0·3	—0·9	+3·2
10th ,, ...	—0·9	+2·7	+1·0
11th ,, ...	—1·5	+0·5	+2·9
12th ,, ...	+1·9	+2·7	+4·3
13th ,, ...	—1·3	+0·7	—1·1
14th ,, ...	—1·0	+0·6	+0·5

The feature was very marked during the first week of the month, and occurred under similar conditions to those accompanying the very low night temperatures in the last week of the month of February :—

III.—The South-West Monsoon Period.—The south-west monsoon current was slightly later than usual in being established in the west coast districts, but advanced with unusual rapidity into the interior and gave an excessively heavy downpour in the Punjab at the end of the second week of June.

Both currents were weak in July and more especially the Bombay current. They were of normal strength in August and weak again in September. The total rainfall of the period was more or less in defect over the whole of Northern and Central India and the north of the Peninsula. The deficiency was most marked in Bengal, Berar Rajputana, Punjab and Central India. The varying temperature conditions of the period were determined by the distribution of the rainfall.

The following summarizes the chief features of the temperature conditions of the period :—

1st.—The maximum or day temperature was generally below the normal in Northern and Central India in June and August and above it in July and September. The variations in the centre and south of the peninsula were generally

opposite in character throughout the period to those in Northern India, but were small in amount. The following table gives comparative data :—

Political Division.	Variation from normal of mean maximum temperature in				
	June 1895.	July 1895.	August 1895.	September 1895.	Period June to September 1895.
	°	°	°	°	°
Burma . . .	+0·6	+1·5	−0·1	+0·4	+0·6
Assam . . .	+3·0	−2·0	−0·6	−0·2	+0·1
Bengal . . .	+0·8	+0·2	+0·2	+1·2	+0·6
Bihar . . .	+1·1	−0·3	−0·3	+0·9	+0·4
Chota Nagpur . .	−1·0	+0·8	+0·5	+2·8	+0·8
North-Western Provinces and Oudh.	−4·1	+1·2	−0·1	+1·6	−0·4
Punjab . . .	−3·6	+0·9	−0·7	+2·4	−0·3
Rajputana . . .	−0·3	+3·9	−0·8	+3·3	+1·5
Central India . .	−2·9	+2·0	+1·3	+2·6	+0·8
Central Provinces .	−1·1	+2·4	−0·1	+3·3	+1·1
Bombay . . .	+0·6	+1·4	+0·5	+0·8	+0·8
Madras . . .	+0·9	−1·1	−0·4	−0·2	−0·2

2nd.—The variations of the night or minimum temperature were similar in character to those of the day temperature, but were smaller in amount.

Political Division.	Variation from normal of mean minimum temperature in				
	June 1895.	July 1895.	August 1895.	September 1895.	Period June to September 1895.
	°	°	°	°	°
Burma . . .	+0·8	+1·0	+0·3	+0·8	+0·7
Assam . . .	+0·7	−0·9	−0·2	0	−0·1
Bengal . . .	+0·1	+0·3	+0·4	+0·9	+0·4
Bihar . . .	+1·0	−0·2	+0·3	+0·4	+0·4
Chota Nagpur . .	−0·7	+0·5	+0·7	+1·0	+0·4
North-Western Provinces and Oudh.	−1·7	−0·9	−0·4	−0·1	−0·8
Punjab . . .	+0·7	+0·3	+0·2	+0·6	+0·5
Rajputana . .	+0·2	+1·3	+0·3	+0·2	+0·5
Central India . .	−2·4	+0·7	+0·1	+0·7	−0·2
Central Provinces .	−0·1	+0·8	0	+0·8	+0·4
Bombay . . .	+0·6	+0·4	+0·2	−0·2	+0·3
Madras . . .	+1·2	−0·3	−0·1	+0·3	+0·3

The mean night temperature of the period varied very slightly from the normal in all divisions (the variations being everywhere less than 1°).

3rd.—The mean temperature of the period was above the normal by small amounts over the whole of India excepting the Punjab and North-Western Provinces. It was generally in slight excess in July, in slight to moderate excess in September, normal in August, and in moderate defect in North-Western India in June. The following table gives comparative data :—

Political Division.	Variation from normal of mean daily temperature in				
	June 1895.	July 1895.	August 1895.	September 1895.	Period June to September 1895.
	°	°	°	°	°
Burma . . .	+0·7	+1·3	+0·1	+0·6	+0·7
Assam . . .	+1·9	−0·6	−0·4	−0·1	+0·2
Bengal . . .	+0·5	+0·3	+0·3	+1·1	+0·6
Bihar . . .	+1·1	−0·3	0	+0·7	+0·4
Chota Nagpur . .	−0·9	+0·7	+0·6	+1·9	+0·6
North-Western Provinces and Oudh.	−2·9	+0·2	−0·3	+0·8	−0·6
Punjab . . .	−2·2	+0·6	−0·3	+1·5	−0·1
Rajputana . .	−0·1	+2·6	−0·3	+1·8	+1·0
Central India . .	−2·9	+1·4	+0·7	+1·7	+0·2
Central Provinces .	−0·6	+1·6	−0·1	+2·2	+0·8
Bombay . . .	+0·7	+0·9	+0·4	+0·3	+0·6
Madras . . .	+1·1	−0·4	−0·3	+0·1	+0·2

IV. The retreating south-west monsoon.—The rains ceased about a month earlier than usual over the whole of Northern and Central India. The rains of the retreating south-west monsoon were abundant in the Peninsula in October, very scanty in November, and in excess in Southern India in December, due almost entirely to an abnormal and heavy fall in the last week of the month. The weather was slightly disturbed with storms of the cold-weather type in Upper India during the months of October and November. Temperature was generally below the normal in October in Northern India, and more especially in North-Eastern India, where it was due to unusually low night temperature. It was in moderate to large excess in November over Northern and Central India, Berar and the Central Provinces, the excess being almost as largely marked in the day as in the night temperature. The variations from the normal conditions in December were small in amount. Temperature in that month was in slight defect in North-Eastern India, normal in Madras, and in very slight excess in Burma and the remainder of India.

A noteworthy feature of this period was the very low night temperature in North-Eastern India, a result of the unusual dryness and stillness of the atmosphere. The following gives data for the period from the 8th to the 24th October :—

Date.	Variation from normal of mean night temperature in		
	Assam.	Bengal, Bihar and Chota Nagpur.	North Western Provinces.
	°	°	°
8th	−5·0	−5·1	−5·8
10th	−4·2	−2·5	−3·7
12th	−2·7	−1·8	−2·9
14th	−2·1	−2·3	−3·0
16th	−3·2	−2·2	+0·1
18th	−4·1	−2·1	−1·5
20th	−4·8	−1·8	−3·1
22nd	−3·7	−2·9	+0·1
24th	−3·5	−2·5	+1·8

The following is a brief statement of the more prominent features of the temperature conditions of India during this period :—

1st—The maximum or day temperature was below the normal to a slight extent in Assam, Bengal and Madras, and normal or above it to a slight extent elsewhere in October. It was above the normal over the whole of India in November, the excess ranging between averages of 5° and 6° in Central India, Rajputana and the Central Provinces. It was normal or in slight excess in December. On the mean of the whole period the day temperature was normal in Madras, Assam, Burma and Bengal, in moderate excess in the Central Provinces (+2°·9) and Central India and Rajputana (each +2°·7), and in slight excess elsewhere. The following gives data in illustration :—

Political Division.	Variation from normal of mean maximum temperature in			
	October 1895.	November 1895.	December 1895.	Period, October to December 1895.
	°	°	°	°
Burma	−0·1	−0·8	−0·5	−0·5
Assam	−1·7	+0·8	+0·4	−0·2
Bengal	−0·8	+1·5	+0·5	+0·4
Bihar	+0·4	+2·8	+0·5	+1·2
Chota Nagpur	+0·4	+3·6	+0·3	+1·4
North-Western Provinces and Oudh.	+1·0	+3·6	+0·6	+1·7
Punjab	+0·1	+2·6	+0·6	+1·1
Rajputana	+1·5	+5·3	+1·2	+2·7
Central India	+1·8	+5·9	+0·4	+2·7
Central Provinces	+1·0	+5·5	+2·1	+2·9
Bombay	0	+3·1	+0·7	+1·3
Madras	−1·1	+1·7	+0·4	+0·3

2nd—The minimum or night temperature was normal in Madras, Bombay and Burma, in slight defect in North-Western India, and in moderate defect in North-Eastern India in October. It was in slight defect in Burma, and in excess over the whole of India in November. The excess was considerable in amount in the Punjab (+5°·0), Central India (+4°·6), and Rajputana (+4°·5). It was in moderate excess in Burma, and in slight defect in North-Eastern India in December. Elsewhere the variations were small. On the mean of the whole period the night temperature was in slight defect in Bengal and Assam, and in slight excess in the Punjab and Central India and Rajputana and normal elsewhere. The following gives data :—

Political Division.	Variation from normal of mean minimum temperature in			
	October 1895.	November 1895.	December 1895.	Period, October to December 1895.
	°	°	°	°
Burma	+0·2	−1·9	+2·1	+0·1
Assam	−3·1	+0·4	−1·2	−1·3
Bengal	−2·0	+1·6	−1·3	−0·6
Bihar	−2·4	+2·6	−1·5	−0·4
Chota Nagpur	−0·9	+2·3	−0·9	+0·2
North-Western Provinces and Oudh.	−2·2	+4·0	+0·1	+0·6
Punjab	−0·5	+5·0	+1·1	+1·9
Rajputana	−2·0	+4·5	+0·6	+1·0
Central India	−1·4	+4·6	+0·7	+1·3
Central Provinces	−1·0	+2·5	−1·1	+0·1
Bombay	−0·4	+0·6	+0·7	+0·3
Madras	+0·3	+0·6	−0·8	0

3rd.—The variations of the mean temperature conditions from the normal were small in December and also in October, except in Assam (—2°·4) and Bengal (—1°·4). Temperature was in slight defect in Burma in November (—1°·4) and was in slight to large excess in India. The excess was largest in Central India (+5°·3), Rajputana (+4°·9), and the Central Provinces, Punjab and North-Western Provinces (each +4°).

On the mean of the whole period temperature was normal in Burma and North-Eastern India and the centre and south of the Peninsula. It was in excess by mean amounts ranging between 1° and 2° in North-Western and Central India, Berar and the Central Provinces.

The following gives comparative data for the period :—

Political Division.	Variation from Normal of mean daily temperature in			
	October 1895.	November 1895.	December 1895.	Period, October to December 1895.
	°	°	°	°
Burma	+0·1	—1·4	+0·8	—0·2
Assam	—2·4	+0·6	—0·4	—0·7
Bengal	—1·4	+1·6	—0·4	—0·1
Bihar	—1·0	+2·7	—0·5	+0·4
Chota Nagpur . .	—0·3	+3·0	—0·3	+0·8
North-Western Provinces and Oudh.	—0·6	+3·8	+0·4	+1·2
Punjab	—0·2	+3·8	+0·8	+1·5
Rajputana . . .	—0·3	+4·9	+0·9	+1·8
Central India . . .	+0·2	+5·3	+0·6	+2·0
Central Provinces . .	0	+4·0	+0·5	+1·5
Bombay	—0·2	+1·9	+0·7	+0·8
Madras	—0·4	+1·2	—0·2	+0·2

The year.—The following table gives the variations of the mean temperature of Extra-Tropical and Tropical India, and also of the whole of India from the normal, month by month, during the year 1895 :—

Month.	Variation from Normal of mean daily temperature in		
	Extra-Tropical India.	Tropical India.	Whole India.
	°	°	°
January	—0·6	+1·0	0
February	+0·8	+0·1	+0·6
March	—0·3	0	—0·2
April	—1·2	—0·9	—1·1
May	+3·4	+0·8	+2·4
June	—0·7	+0·7	—0·2
July	+0·4	+0·3	+0·3
August	—0·2	+0·1	—0·1
September	+0·8	+0·4	+0·7
October	—0·5	+0·2	—0·2
November	+2·6	+1·3	+2·1
December	—0·1	0	—0·1
Whole year	+0·4	+0·3	+0·4

The variations of the mean temperature conditions from the normal were hence generally small in amount.

The mean temperature of the whole Indian area was normal or in excess in six months, and in defect during the remaining six months of the year. The excess was general and moderately large in two months only, *viz.*, May and November. It was large in Extra-Tropical India in May, averaging 3°·4. It was only 0°·8 in Tropical India. In November the excess averaged 2°·6 in Extra-Tropical India and 1°·3 in Tropical India.

The mean temperature of the year of Extra-Tropical India was 0°·4 above the normal and of Tropical India 0°·3 above. The annual variations were small over the greater part of India, and were 1°or upwards in three only out of the eighteen divisions of Table I, *viz.*, the Punjab (+2°·0) and Rajputana and Central India (each 1° in excess).

The variations of the mean temperature of the whole of India from the normal were less than ½° in eight months out of the year.

The following gives a summary of the more important features of the temperature conditions of the year : —

(1) The mean temperature conditions of the year were very approximately normal over the whole of India.

(2) The cold weather period was warmer than usual.

(3) The chief feature of the hot weather period was the excessive temperature in the Punjab, Rajputana and Upper Sind throughout the month of May, and in West Bengal, Bihar, Chota Nagpur and the eastern districts of the Central Provinces during the last week of the month.

(4) Temperature was in slight general excess during the rains from June to September, the excess being most marked in Southern India in June and in North-West and Central India in July and September.

(5) During the retreating south-west monsoon period temperature was in moderate to large excess in November and normal in December, except in Upper India, where it was in slight excess.

The following table gives the progressive variations of the mean annual temperatures of the past 20 years: —

Year.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Number of stations.	72	72	74	74	70	106	110	113	122	122	118	122	126	127	81	85	72	74	68	66	69
Mean anomaly.	−0·29	−0·08	+0·17	+·062	−0·13	+0·13	−0·01	−0·11	−0·48	−0·61	−0·29	+0·08	−0·23	+0·36	+0·86	+0·13	−0·03	+0·66	−1·33	+0·11	+0·35
Progessive variation.	...	+0·21	+0·25	+·045	−0·75	+0·26	−0·14	−0·10	−·037	−0·13	+0·32	+0·37	−0·31	+0·59	+0·50	+0·73	−0·16	+0·69	−1·99	+1·44	+0·24

Atmospheric Pressure.

Full information is given in the annual reports formerly issued by the Department of the barometers in use at Indian observatories and of the methods of reducing the observations and obtaining the mean daily and monthly pressures (*e.g.*, pages 58 and 59 of the report for 1890).

In Table II of each monthly review the monthly mean pressure (corrected for temperature) is given in the fifth figure column, and the variation from the normal in the sixth figure column, for each station. The variation data are obtained by a comparison of the actual monthly means, with the corresponding normal monthly means published in the last two annual reports (*i.e.*, Table XV, in the reports for 1889 and 1890[1]). The figures in the fifth and sixth figure columns of Table II of the present annual summary, giving the mean pressure of the air and its variation from the normal for all second class stations, are strictly comparable with the corresponding data of previous years published in the annual reports and summaries.

In the seventh figure column of Table II, in each monthly review, the mean pressures reduced to sea-level and corrected to constant gravity (Lat. 45°) are given. These, it should be noted, are not comparable with the sea-level pressure values of previous years in the annual reports, as previously to 1891 no correction was made to reduce the monthly pressure means to standard gravity.

In Table I of each monthly review and also of the Annual Summary the pressure data are given for a fixed hour local time (*viz.*, 8 A.M.) of the day. The second figure column in those tables gives the mean 8 A.M. pressures for the month corrected for temperature. In the third figure column the variations of the mean 8 A.M. pressure from the normal mean 8 A.M. pressure are exhibited.

Normal 8 A.M. mean monthly data for the great majority of stations will be found in the Annual Summary of 1894 Tables VII and VIII.

Mean pressure data for the year 1895 will be found under the headings "Pressure" in Tables I and II appended to the present Annual Summary.

The following tables give the geographical summaries of the pressure variation data according to the two groups of divisions employed in the corresponding tables of temperature variation data, that is, for the eighteen divisions for which the variation data were given in the "Geographical Summaries" in the annual reports previous to 1891 and for the eleven meteorological provinces in Table I of each monthly review:—

TABLE IV.—*Geographical Summary of the pressure variation data of Table II of the monthly reviews of 1895.*

Meteorological Province.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
North-West Himalayas.	6–7	−·003	+·047	−·007	+·009	+·018	+·022	+·012	−·014	+·022	−·010	+·045	+·011	+·013
Sikkim Himalayas, and Nepal.	1–2	−·002	+·022	−·017	+·006	0	+·010	−·025	−·034	+·007	−·045	+·021	−·003	−·005
Punjab Plains . .	3–4	+·016	−·006	−·019	+·005	−·049	+·045	+·021	−·012	+·019	−·009	+·005	+·008	+·002
Gangetic Plain .	7–9	−·003	+·016	−·020	+·023	−·040	+·042	+·008	−·024	+·012	−·007	+·008	0	+·001

TABLE IV.—*Geographical Summary of the pressure variation data of Table II of the monthly reviews of 1895.*—concld.

Meteorological Provinces.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Western Rajputana .	3	+·010	—·013	—·015	—·022	+·009	0	+·031	—·016	+·042	—·009	+·016	+·014	+·004
Eastern Rajputana and Central India.	5	—·005	+·010	—·003	—·002	—·018	+·020	+·031	—·015	+·032	—·001	+·017	+·013	+·007
Nerbudda Valley .	1—3	—·019	+·005	—·009	—·007	—·014	+·002	+·027	—·017	+·027	+·006	+·030	+·015	+·004
Chota Nagpur . .	1	—·006	+·022	—·017	+·006	—·027	+·007	+·017	—·020	+·028	+·012	+·016	—·004	+·003
Lower Bengal . .	5	—·005	+·021	—·016	+·027	—·027	+·026	+·022	—·019	+·010	+·012	+·020	—·012	+·005
Assam and Cachar .	3	—·023	+·006	—·030	+·027	—·034	+·019	+·013	—·016	+·009	+·002	+·030	—·014	—·001
Orissa . . .	2	—·021	+·013	—·019	+·010	—·028	—·002	+·015	—·034	+·019	+·009	+·011	—·024	—·004
Central Provinces (South) and Berar.	4—5	—·023	+·008	—·016	—·002	0	+·009	+·031	—·009	+·029	+·010	+·035	+·005	+·006
Konkan . . .	3	—·013	+·008	—·029	+·004	+·040	—·012	+·027	—·004	+·019	—·010	+·046	+·002	+·007
Malabar Coast .	1	—·008	+·005	—·028	+·006	+·031	—·019	+·019	—·015	—·002	—·021	+·039	—·019	—·001
Deccan, Hyderabad and Mysore.	5—6	—·017	+·005	—·025	+·011	+·021	—·009	+·015	—·013	+·004	—·008	+·048	—·003	+·002
Eastern Coast and Carnatic.	4	—·009	+·006	—·022	—·002	—·003	—·006	+·012	—·023	—·006	+·008	+·044	—·018	—·002
Arakan and Pegu .	4	—·030	—·009	—·034	—·003	—·009	—·004	+·004	—·027	—·011	+·002	+·041	—·027	—·009
Bay Islands . .	1	—·009	+·008	—·027	+·001	+·016	—·002	+·003	—·012	—·013	+·012	+·033	—·024	—·001
Extra Tropical India	37—42	—·003	+·016	—·015	+·010	—·020	+·025	+·016	—·018	+·020	—·004	+·021	+·003	+·004
Tropical India .	24—26	—·018	+·005	—·025	+·003	+·007	—·004	+·017	—·016	+·007	+·001	+·040	—·010	+·001
Whole India . .	63—68	—·009	+·012	—·018	+·008	—·010	+·014	+·017	—·017	+·015	—·002	+·029	—·002	+·003

TABLE V.—*Variation of the mean pressure of each month of 1895 from the normal in the eleven meteorological provinces of India.*

Meteorological Provinces.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Year.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma Coast and Bay Islands	—·025	—·010	—·030	0	—·005	—·001	+·011	—·026	—·007	+·005	+·055	—·021	—·004
Burma Inland . . .	—·024	0	—·026	+·008	—·009	+·007	+·007	—·029	0	—·003	+·055	+·008	—·001
Assam	—·019	+·018	—·025	+·027	—·026	+·031	+·019	—·014	+·011	+·019	+·035	—·009	+·006
Bengal and Orissa . .	—·010	+·018	—·019	+·032	—·030	+·029	+·018	—·018	+·015	+·005	+·032	—·012	+·005
Gangetic Plain and Chota Nagpur.	—·002	+·023	—·014	+·036	—·032	+·039	+·014	—·016	+·023	+·011	+·021	—·002	+·007
Upper Sub-Himalayas .	+·005	+·015	—·018	+·026	—·035	+·053	+·013	—·017	+·019	—·006	+·014	+·002	+·006
Indus Valley and North-West Rajputana.	+·005	—·016	—·024	—·011	—·013	+·018	+·028	—·013	+·029	—·005	+·010	+·007	+·001
East Rajputana, Central India and Gujarat.	—·006	+·008	—·013	0	+·002	+·014	+·037	—·009	+·035	0	+·022	+·010	+·008
Deccan	—·013	+·014	—·011	+·010	0	+·004	+·030	—·008	+·028	+·010	+·038	+·014	+·010
West Coast . . .	—·014	+·005	—·030	+·008	+·035	—·013	+·019	—·008	+·006	—·018	+·048	—·006	+·003
South India	—·014	+·011	—·017	+·008	+·012	+·006	+·017	—·013	—·001	+·004	+·054	—·010	+·005

I. The Cold Weather Period.—The mean pressure of the Indian area was in slight defect in January and in slight excess in February. The weather was slightly more disturbed than usual in January in North-Western India, the number of cold weather storms greater than usual, and the precipitation of the month in moderate excess in North-Western and Central India and below the normal elsewhere. Pressure in January was in slight to moderate relative excess in North-Western and Central India and in slight defect in Arakan, Assam, Orissa and the Central Provinces. Pressure averaged ·018″ in defect in the Peninsula and ·003″ in Extra-Tropical India. The vertical pressure anomalies in Northern India were negative, but small in amount. The pressure conditions in February differed in one or two important respects from those of January. The most significant was the prevalence of large positive vertical pressure anomalies in Upper India. The following gives data in illustration for eight pairs of stations :—

Hill and Plain stations.	Vertical pressure anomaly.		
	January 1895.	February 1895.	Mean of period January and February 1895.
	″	″	″
Leh and Lahore	−·025	+·116	+·046
Murree and Peshawar	−·030	+·057	+·014
Simla and Ludhiana	−·044	+·016	−·014
Ranikhet and Bareilly	+·005?	+·014	+·010
Chakrata and Roorkee	+·009	+·004	+·020
Darjeeling and Dhubri	+·016	+·011	+·014
Mount Abu and Deesa	−·009	−·004	—·007
Quetta and Jacobabad	−·014	+·059	+·023

The preceding data show that the vertical pressure anomalies, which were negative but moderate in amount in January, were positive and large in February and increased in magnitude with elevation. This change accompanied a corresponding change of weather in Northern India, weather being much finer and less disturbed than usual in February. It may be noted that the opposite change from fine weather in January to very stormy and wintry weather in February occurred over the greater part of Europe.

Pressure was in general excess over the Indian area in February by amounts averaging ·005″ for Tropical India and ·016″ for Extra-Tropical India. Relatively to the general condition, pressure was in slight excess in North-Eastern India and in slight defect in the Peninsula and Arakan. This feature, *viz.*, deficiency of pressure in the Peninsula relatively to Northern India, was hence common to the two months of January and February.

Pressure was in the latter month in moderate defect relatively to the general condition in the Punjab, Sind, Cutch and Rajputana—a result of the abnormally high temperature in that area. The following data illustrate the local conditions in Upper India in January and February :—

Province.	Pressure anomaly.		
	January 1895.	February 1895.	Change.
	″	″	″
Baluchistan (Quetta)	+·020	+·035	+·015
Punjab	+·018	−·009	−·027
Sind and Cutch	+·015	−·025	−·040
Rajputana	+·002	−·003	−·005
North-Western Provinces and Oudh	+·005	+·007	+·002
Central India	+·005	+·004	−·001
Bihar and Chota Nagpur	+·009	+·012	+·003
Bengal and Orissa	−·001	+·009	+·010
Bombay	−·004	−·002	+·002
Madras	−·008	−·003	+·005
Burma	−·015	−·018	−·003
Arakan	−·017	−·013	+·004
Central Provinces	0	+·011	+·011

The preceding data indicate that relatively to the normal conditions of the period, pressure decreased considerably in the Punjab, Sind and Cutch, and increased to a moderate extent at the level of the Baluchistan Plateau, and to a large extent at the level of the hill stations in Upper India, whereas over the remainder of India the pressure changes were practically those normal to the season.

II. The Hot Weather Period.—Weather was, on the whole, less disturbed than usual in the month of March, more especially in North-East India. April was, on the other hand, more disturbed than usual, and numerous series of thunderstorms and other hot-weather storms occurred over the whole country, giving more frequent showers and heavier rainfall than usual. May was an unusually dry and hot month, and temperature was, as in May 1894, excessive in Northern India (more especially in the Punjab, Upper Sind and Rajputana) in May 1895.

The mean pressure of the Indian area was below the

normal in March and May, and in slight excess in April as is shown by the following statement:—

Month.	Mean pressure variation.			
	Whole of India.		Tropica India.	Extra Tropical India.
	From data of Table I.	From data of Table II.		
	"	"	"	"
March	−·018	−·018	−·025	−·015
April	+·013	+·008	+·003	+·010
May	−·007	−·010	+·007	−·020

The deficiency averaged ·004″ for the whole period, and was hence small in amount.

The following table gives the local variations of pressure or anomalies for each month, and the mean variations of the period for each of the eleven meteorological provinces:—

Meteorological Province.	Pressure anomaly.			
	March 1895.	April 1895.	May 1895.	Period, March May 1895.
	"		"	"
Burma Coast and Bay Islands.	−·012	−·013	+·002	−·008
Burma Inland . .	−·008	−·005	−·002	−·005
Assam	−·007	+·014	−·019	−·004
Bengal and Orissa . .	−·001	+·019	−·023	−·002
Gangetic Plain and Chota Nagpur.	+·004	+·023	−·025	+·001
Upper Sub-Himalayas .	0	+·013	−·028	−·005
Indus Valley and North-West Rajputana.	−·006	−·024	−·006	−·012
East Rajputana, Central India, and Gujarat.	+·005	−·013	+·009	0
Deccan	+·007	−·003	+·007	+·004
West Coast . . .	−·012	−·005	+·042	+·008
South India . . .	+·001	−·005	+·019	+·005

The local variations were small in amount in March and April, and were moderate to considerable in amount in May. The chief features of the pressure conditions of the hot weather period, as indicated by the data of the preceding table and of tables IV and V, were—

1st.—A slight deficiency in North-Eastern India (*i. e.*, Assam, Bengal, Bihar and Chota Nagpur) and Burma. It was largest in Assam, East Bengal and probably Upper Burma.

2nd.—A slight to moderate excess in the Peninsula. The excess was, on the whole, most pronounced in the West Coast districts, Deccan, Khandesh and Berar.

3rd.—The vertical pressure anomalies in Northern India were small in amount in March and April and large in May. This is more fully shown by the data of the following table which gives the vertical pressure anomalies as determined from the pressure variations of eight pairs of stations in Northern and Central India:—

Hill and Plain stations.	Vertical pressure anomaly.			Mean of period, March to May 1895.
	March 1895.	April 1895.	May 1895.	
	"	"	"	"
Quetta and Jacobabad .	−·001	+·034	+·063	+·032
Leh and Lahore . .	+·024	+·012	+·101	+·046
Kailang and Lahore . .	+·026	+·004	+·079	+·036
Murree and Peshawar .	+·009	+·008	+·043	+·020
Simla and Ludhiana .	−·010?	−·013	+·060	+·012
Darjeeling and Calcutta .	+·002	−·013	+·033	+·007
Mount Abu and Deesa .	+·004	−·001	−·010	−·002
Pachmarhi and Nagpur .	?	−·009	+·019	?

The vertical anomalies were small in March, but generally positive, and hence in conformity with the usual relation between that feature and the rainfall of the period in Upper India. They were small to moderate in amount and generally positive in April. They were large in amount and positive in May for all the hill stations in Northern and Central India except Mount Abu.

This large relative excess of pressure at the hill stations in May was chiefly a result of the excessive temperature prevailing at the level of the plains in Northern India.

The pressure anomalies of the month of May were large and marked, and were such as invariably accompany the prevalence of excessive temperature and exaggerated hot-weather conditions in Northern India antecedent to the rains. They were similar in character to those of the two preceding months, but were large in amount and were very influential in modifying the distribution of the south-west monsoon rainfall in Northern India. The following states more fully the chief abnormal features of the pressure conditions of May 1895.

Pressure was in that month relatively to the general condition in local defect (or the anomalies were negative) in Northern India and the eastern states of Central India. The anomalies exceeded ·03″ in amount over nearly

the whole of the Punjab and North-Western Provinces as is shown by the following data :—

Station.	Pressure anomaly in May 1895.
	"
Mooltan	−·048
Allahabad	−·040
Lahore	−·038
Ludhiana	−·038
Sirsa	−·033
Agra	−·034

Pressure was in local excess or the pressure anomalies were positive in the Peninsula and Western India. They were largest at the West Coast stations at which they exceeded ·040″, *e. g.*

Station.	Pressure anomaly in May 1895.
	"
Rajkot	+·044
Bombay	+·043
Ratnagiri	+·052
Goa	+·048
Karwar	+·049

The vertical pressure anomalies in Northern India were positive and large in amount, and were also a result of the pronounced high temperature conditions of the month in the plains of Northern India. Data illustrating this feature have been given in the preceding page.

The pressure and temperature conditions of the month of May 1895 were very similar to those of May 1894. The abnormal pressure conditions were in May 1895, the development of slight variations existing in March and April, and were due to the excessive temperature of the month, more especially of the last fortnight.

III. The South-West Monsoon Period.—The south-west monsoon currents were later than usual in advancing across the West Coast districts, but extended with unusual rapidity into the interior and gave moderate to heavy rain in Upper India during the last fortnight of June. They were of normal strength in June and August, but were very feeble in July and September. Their weakness in July was chiefly shown by the scanty rainfall over Northern and Central India during the greater part of that month and the diversion of the current to the Deccan and Southern India. In September the weakness of the currents was chiefly indicated by their abnormally early retreat from Upper India in the first week of the month when dry weather and clear skies, characteristic of October and November, set in and held steadily until the end of the year. The chief features of the temperature conditions of the period were determined by the distribution of the rainfall.

The abnormal pressure features of the period varied to some extent from month to month, but they were on the whole very feebly marked, although the rainfall of the period in India was not only in considerable defect, but very irregularly distributed throughout the period. The mean pressure of the Indian area was above the normal for the three months of June, July and September. Pressure was, on the other hand, in slight defect in August, in which month the monsoon currents were of normal strength and the rainfall general and approximately normal in its distribution and amount.

The following gives data of the mean variations of pressure of the Indian area during this period :—

Month.	Mean variation of pressure from normal.			
	Whole of India, Table I.	Whole of India, Table II.	Extra-Tropical India, Table II.	Tropical India, Table II.
	"	"	"	"
June	+·019	+·014	+·025	−·004
July	+·022	+·017	+·016	+·017
August	−·013	−·017	−·018	−·016
September	+·017	+·015	+·020	+·007

In the following table are given the anomalies for each month of the period and for the whole period in the eleven meteorological provinces :—

Meteorological Province.	Pressure anomaly.				
	June 1895.	July 1895.	August 1895.	September 1895.	Mean of period.
	"	"	"	"	"
Burma Coast and Bay Islands.	−·020	−·011	−·013	−·024	−·017
Burma Inland	−·012	−·015	−·016	−·017	−·015
Assam	+·012	−·003	−·001	−·006	+·001
Bengal and Orissa	+·010	+·004	−·005	−·002	+·002
Gangetic Plain and Chota Nagpur.	+·020	−·008	−·003	+·006	+·004
Upper Sub-Himalayas.	+·034	−·009	−·004	+·002	+·006
Indus Valley and North-West Rajputana.	−·001	+·016	0	+·012	+·007
East Rajputana, Central India and Gujarat.	−·005	+·015	+·003	+·018	+·008
Deccan	−·015	+·008	+·005	+·011	+·002
West Coast	−·032	−·003	+·005	−·011	−·010
South India	−·013	−·005	0	−·018	−·009

The anomalies were small, but were similar in character throughout the period over the greater part of India. The chief persistent features were—

(1) slight deficiency in Burma throughout the period;
(2) slight excess throughout the whole period in Rajputana, the Punjab, Sind and Baluchistan;
(3) slight deficiency in the West Coast districts and South India.

These features, although feebly marked, were very persistent throughout the whole season.

The trough of low pressure in Northern India occupied its normal position, the axis stretching from Orissa to Upper Sind or the South-West Punjab in the months of June and August, those of most general and favourable rainfall during the monsoon of 1895. It was considerably further north than usual on the average of the month in July. The mean position of the axis in that month was defined by the stations of Bhagalpur, Arrah, Buxar, Lucknow, Mainpuri and Meerut.

Its position in September was due to the early withdrawal of the monsoon currents in the first week of September from Upper India. The accompanying rise of pressure in North-Western India transferred the western extremity of the axis eastwards. The trough on the mean of the month extended in a north-north-westerly direction from the north-west of the Bay across the Orissa coast into Central Bihar and the eastern districts of the North-Western Provinces.

The position of the trough of low pressure was directly related throughout the whole season to the tracks of the cyclonic storms.

In the following table are given the vertical pressure anomalies in Northern India as determined by the variation data of six pairs of stations:—

Pair of stations.	Vertical pressure anomaly in—				Mean of period, June to September 1895.
	June 1895.	July 1895.	August 1895.	September 1895.	
	"	"	"	"	"
Leh and Lahore .	−·062	−·025	−·007	+·004	−·023
Murree and Peshawar	−·026	−·029	−·023	−·011	−·022
Quetta and Jacobabad	−·010	−·004	−·003	−·013	−·008
Simla and Ludhiana.	−·024	+·014	+·012	+·012	−·004
Darjeeling and Calcutta.	+·007	−·041	−·005	−·028	−·017
Mount Abu and Deesa	−·013	−·018	−·012	−·014	−·014
Mean of month .	−·021	−·017	−·006	−·008	−·015

The vertical pressure anomalies in Northern India were hence negative throughout the whole season. They were moderate in amount in June and July and small in August and September.

IV. The Retreating South-West Monsoon Period.—The mean pressure of the Indian area was normal in October and December and in largish excess in November. The following gives data:—

Month.	Mean variation of pressure from normal.			
	Whole of India, Table I.	Whole of India, Table II.	Extra-Tropical India, Table II.	Tropical India, Table II.
	"	"	"	"
October	+·002	−·002	−·004	+·001
November . . .	+·033	+·029	+·021	+·040
December . . .	−·002	−·002	+·003	−·010
Mean of period . .	+·011	+·008	+·007	+·010

In the following table are given the pressure anomalies or local pressure variations for the eleven meteorological provinces of India for each month of this period and the average variations for the whole period:—

Meteorological Province.	Pressure anomaly.			
	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
	"	"	"	"
Burma Coast and Bay Islands.	+·003	+·022	−·019	+·002
Burma Inland . . .	−·005	+·022	+·010	+·009
Assam	+·017	+·002	−·007	+·004
Bengal and Orissa . .	+·003	−·001	−·010	−·003
Gangetic Plain and Chota Nagpur.	+·009	−·012	0	−·001
Upper Sub-Himalayas .	−·008	−·019	+·004	−·008
Indus Valley and North-West Rajputana.	−·007	−·023	+·009	−·007
East Rajputana, Central India and Gujarat.	−·002	−·011	+·012	0
Deccan	+·008	+·005	+·016	+·010
West Coast . . .	−·020	+·015	−·004	−·003
South India . . .	+·002	+·021	−·008	+·005

The following gives the chief features of the variations of pressure from the normal during the period:—

1st.—Moderate local excess of pressure in Burma, greatest in November, and small in December.

2nd.—Slight, but persistent, local excess in the Deccan and Southern India. The excess was most

marked in Southern India in November and in the Deccan in December.

3rd.—Slight local deficiency in North-Western India, including the Punjab, North-Western Provinces, Rajputana and Sind, in the months of October and November and slight excess in the same areas in December.

The most important feature of the pressure distribution of this period was the change of conditions which occurred in the beginning of December. The abnormal pressure conditions of December were, over nearly the whole of the Indian area, the opposite of those which obtained in October and November. The following data illustrate the opposition :—

Area.	Pressure anomaly.	
	Mean, October and November 1895.	December.
	"	"
Burma Coast and Bay Islands	+·013	−·019
Bengal and Orissa	+·001	−·010
South India	+·012	−·008
Gangetic Plain and Chota Nagpur	−·002	0
North-Western India	−·013	+·007

The following gives vertical pressure anomalies in North-Western India, as determined from the variation data of seven pairs of stations :—

Pair of stations.	Vertical pressure anomaly in			Mean of period, October to December 1895.
	October 1895.	November 1895.	December 1895.	
	"	"	"	"
Leh and Lahore	0	+·050	+·022	+·024
Kailang and Lahore	+·015	+·052	+·028	+·032
Murree and Peshawar	−·016	+·030	+·004	+·006
Quetta and Jacobabad	−·016	+·007	−·010	−·006
Simla and Ludhiana	−·009	+·025	−·012	+·001
Chakrata and Roorkee	+·017	+·050	+·015	+·027
Darjeeling and Calcutta	−·047	−·003	−·003	−·018
Mean of month	−·008	+·030	+·006	+·009

The vertical anomalies were positive in November and December and were small, but negative, in October, thus indicating a marked tendency to the establishment of increased pressure at the level of the hill stations in Northern India in the last two months of the year.

The year.—The mean pressure of the Indian land area for the year 1895 (as obtained from observations at 10 and 16 hours) differed little from the normal, being only ·003″ in excess.

The mean for Tropical India was nearly identical with the normal and that for Extra-Tropical India was ·004″ in excess. The only areas in which the variations exceeded ·006″ from the normal were the North-West Himalayas, Eastern Rajputana and Central India, the Konkan and Arakan and Pegu. The following gives data for these four areas :—

Area.	Pressure variation from normal, Table II.
	"
North-West Himalayas	+·013
Eastern Rajputana and Central India	+·007
Konkan	+·007
Arakan and Pegu	−·009

The mean pressure for the whole Indian land area was alternately negative and positive during the first and last five months of the year and by almost equal amounts. The greatest excess was in November (+·029″) and the greatest defect in March (−·018″).

The following gives the mean monthly variations of the pressure of the whole of India from the normal as deduced from the mean 8 A.M. monthly values and also from th mean monthly values as obtained from the 10 A.M. and 4 P.M. observations :—

Month.	Variation of mean pressure over whole India from the normal.	
	From 8 A.M. observations.	From 10 A.M. and 4 P.M. observations.
	"	"
January	−·009	−·009
February	+·009	+·012
March	−·018	−·018
April	+·013	+·008
May	−·007	−·010
June	+·019	+·014

Month.	Variation of mean pressure over whole India from the normal.	
	From 8 A.M. observations.	From 10 A.M. and 4 P.M. observations.
	"	"
July	+·022	+·017
August	−·013	−·017
September	+·017	+·015
October	+·002	−·002
November	+·033	+·029
December	−·002	−·002
Year	+·006	+·003

The following table gives the monthly variations of pressure at four hill stations for comparison with variations of pressure at the level of the plains in India :—

Month.	Variation of mean pressure of month or from normal.				
	Plains of India.	Leh.	Quetta.	Murree.	Simla.
1895.	"	"	"	"	"
January	−·009	−·013	+·011	−·021	−·022
February	+·009	+·118	+·044	+·045	+·037
March	−·018	+·006	−·023	−·012	−·018
April	+·013	+·022	+·025	+·012	+·008
May	−·007	+·051	+·043	+·014	+·015
June	+·019	−·012	+·015	+·027	+·029
July	+·022	−·016	+·028	+·004	+·022
August	−·013	−·025	−·010	−·016	−·015
September	+·017	+·018	+·040	+·022	+·026
October	+·002	−·014	−·004	−·006	−·014
November	+·033	+·055	+·025	+·038	+·042
December	−·002	+·028	+·015	+·007	−·004
Mean of Year 1895.	+·006	+·018	+·017	+·010	+·009

The following gives a statement of the cyclones and more important cyclonic storms which affected the Indian area during the south-west monsoon of 1895, drawn up in the form adopted in the Annual Reports of the Meteorology of India for the years 1886-90. The tracks of these storms are charted in plate VI :—

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
			"		
1	April	23rd to 26th	·99	Very severe cyclonic storm.	This storm was generated rapidly in the south of the Bay to the west-south-west of the Andamans after the setting in of strongish humid south-west winds in the south of the Bay. It marched northwards on the 22nd, 23rd, 24th and 25th, recurving to east and increasing in intensity and in rate of motion. The centre passed inland across the Arakan coast on the early morning of the 26th and broke up very rapidly during the morning. It was a storm of small extent, but great severity and occasioned winds and squalls of hurricane force near the centre on the 25th. It was remarkable for its high rate of motion during the last 24 hours of its advance in the Bay.
2	June	13th to 18th	" ·25	Cylonic storm of moderate intensity.	This storm was formed in the Arabian Sea off the Konkan coast on the 13th and 14th in front of the advancing monsoon. It drifted very slowly north-westwards off the Kathiawar and Sind coasts on the 15th, 16th and 17th, and thence passed as a residual depression westwards along the Mekran coast, affecting Jask and Muscat on the 21st and 22nd.
3	June	19th to 21st	" ·2	Feeble cyclonic storm.	This storm formed in the north-west angle of the Bay in front of the first permanent advance of monsoon winds in the north of the Bay. It intensified slowly on the 17th and 18th and marched towards the Orissa coast, which it crossed on the afternoon of the 19th. It continued to advance along a west-by-north track across the Central Provinces into Central India on the 21st. It was absorbed in the Sind permanent low pressure area during the day. The storm was remarkable for the heavy rain it gave to the greater part of the Central Provinces and Central India.
4	June and July.	28th June to 2nd July.	" ·3	Cyclonic storm of moderate intensity.	The storm originated in the north-west angle of the Bay on the 26th and 27th. It developed rather rapidly and advanced across the Orissa coast near Balasore about 3 P.M. on the 28th. It then marched slowly in a north-west direction through Chota Nagpur on the 29th, the eastern districts of the North-Western Provinces on the 30th and the central districts on the 1st and filled up in Rohilkhand during the night of the 1st. The storm caused strong cyclonic winds on the 29th and 30th and was noteworthy for the heavy burst of rainfall which it gave to Orissa and the North-Western Provinces.
5	July	17th to 21st	" ·1	Feeble cyclonic storm.	This feeble storm was generated off the Orissa and Ganjam coasts on the 17th and 18th. The centre crossed the North Orissa coast on the afternoon of the 19th and drifted along

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
					a more northerly track than usual in July and finally passed into Central Bihar on the 21st, where it filled up during the day. It was throughout a feeble storm and the strongest winds in the storm area did not exceed 8 in force.
6	July and Aug.	28th July to 2nd Aug.	" ·2	Feeble cyclonic storm.	This storm formed rapidly in the north-west angle of the Bay on the 28th and 29th. The centre crossed the coast near Balasore on the afternoon of the 30th and drifted slowly along the trough of low pressure to the North-Western Provinces on the 1st August and broke up in the western districts of that area on the afternoon and evening of the 2nd. Like the previous storm it was of feeble intensity throughout and the strongest winds in the north of the Bay during its existence were only of force 8.
7	Aug. .	5th to 10th	" ·25	Cyclonic storm of moderate intensity.	This storm formed rapidly on the 5th and 6th in the north-west angle of the Bay and crossed the Orissa coast on the morning of the 7th. It advanced with unusual rapidity along a westerly track at an average rate of 20 miles per hour and was central near Jubbulpore on the 8th and Deesa on the 9th. It broke up in Sind and the Baluchistan highlands during the next 24 hours. The strongest winds experienced by vessels in the north of the Bay during its existence were only of force 7.
8	Sept. .	3rd to 7th	" ·55	Severe cyclonic storm.	This was a remarkable storm in several respects. It was generated in the centre of the Bay under conditions which obtain during the origin of the more intense cyclonic storms of the October transition period. It advanced in a westerly direction towards the Circars coast, which it crossed near Cocanada about 5·30 P.M. on the 5th. It curved slightly to north and passed through the central districts of the Hyderabad State on the 6th into Khandesh on the 7th and filled up rapidly during the day under the influence of the transverse ranges in Gujarat. It was a severe storm and gave excessive rain in the Godavari and Kistna districts of Madras and in Hyderabad, Khandesh and the Bombay Deccan.
					This heavy downpour caused heavy floods which carried away several of the railway bridges on the Great Indian Peninsula and Nizam's Railways, suspending traffic for some time. Winds of hurricane force were experienced by the S. S. *Nowshera* at Cocanada on the 5th.
9	Sept. .	17th to 20th	" ·25	Cyclonic storm of moderate intensity.	This storm formed in the north of the Bay on the 15th and 16th. It marched in a north-westerly direction up the Bay on the 17th and 18th and crossed the North Orissa coast on the evening of the 18th. It passed through Chota Nagpur on the 19th into the eastern districts of the North-Western Provinces on the 20th, and broke up rapidly during the day near the hills. The strongest winds actually reported by vessels in the storm area were of force 6 to 7.
10	Sept. and Oct.	28th Sept. to 2nd Oct.	" ·65	Cyclone.	This storm formed in the north-west of the Bay on the 28th and 29th September. It crossed the Bengal coast during the evening of the 1st October and recurving with great rapidity to east passed into Central and East Bengal on the 2nd. It filled up almost entirely during the next 24 hours over Upper Assam and Upper Burma. The storm gave heavy rain to Assam, South and East Bengal and Upper Burma. This downpour, combined with the stormy winds, caused much destruction of crops and property in South-East Bengal. The F. L. V. *Hesperus* experienced winds of force 11 on the evening of the 1st.
11	Dec. .	9th to 12th	" 1·15	Cyclone	This storm formed to the west-south-west of the Andamans on the 9th. It intensified rapidly on the 10th and marched northwards (recurving slightly to east) with rapidly increasing velocity to the East Bengal coast, which it crossed near Barisal early on the morning of the 12th. It broke up rapidly during the day. The storm was noteworthy for the rapidity of its formation, its unusual course, and the rapidity of its march during the last 24 hours of its existence. It gave heavy rain to Bengal. The ships *Banin* and *Wanderer*, which were involved in the inner storm area, experienced winds of hurricane force.

Winds.

The mean direction of the wind and the mean diurnal movement of the air, as measured by Robinson anemometers, are given for every station in Table II in each monthly review. The normal values are also given for the sake of ready comparison. The normal data of these elements will be found in a collected form in Tables XX

and XXI of the Annual Report for 1890. The mean 8 A.M. wind directions for each month are laid down in the first chart in each monthly review. They are calculated in the usual manner from the 8 A.M. wind data given in Table I in each monthly review. As a general rule, the mean 8 A.M. wind directions vary little from the mean wind directions (calculated from the 10 and 16 hours wind data) in Table II of each monthly review, but in some cases and at certain seasons of the year they differ very considerably.

The chief features of the air movement over India in 1895 have been described in the monthly reviews of the year. The following gives a summary of the most important features :—

I. The Cold Weather Period.—The month of January was somewhat more disturbed than usual in Northern India. February was, on the other hand, very fine. The winds at the hill stations in Northern India were hence considerably stronger than usual in January and normal or slightly above their normal strength in February. The following gives data in illustration :—

Station.	Mean daily air movement in miles during—					
	January 1895.			February 1895.		
	Mean actual.	Mean normal.	Percentage variation.	Mean actual.	Mean normal.	Percentage variation.
Murree . .	257	198	+30	212	196	+ 8
Chakrata . .	165	114	+45	162	125	+30
Ranikhet . .	51	43	+19	65	52	+25
Darjeeling . .	105	62	+69	147	121	+22
Mount Abu .	152	113	+35	144	131	+10
Pachmarhi .	135	73	+85	123	92	+34

Winds were on the mean of the period of normal strength and steadiness in Northern India as is shown by the following data :—

Province.	Steadiness during cold weather period.			Mean wind velocity in miles per diem during cold weather period.		
	Mean actual.	Mean normal.	Variation from normal.	Mean actual.	Mean normal.	Percentage variation.
Bengal . .	46	34	+12	73	83	−12
Bihar . .	63	47	+16	88	67	+31
Chota Nagpur .	55	57	− 2	174	137	+27
North-Western Provinces.	44	34	+10	54	63	−14
Punjab . .	38	34	+ 4	46	50	− 8
Rajputana . .	65	72	− 7	101	121	−17

Winds were, as usual, very unsteady in Central India, Berar, the Central Provinces and the North Deccan. The following gives data of the mean steadiness :—

District.	Wind steadiness in—		Steadiness during cold weather period.	
	January 1895.	February 1895.	Mean actual.	Variation from normal.
Central India . . .	28	39	34	+3
Berar	29	15	21	−6
Central Provinces . .	26	29	28	+4

Sea winds set in on the Sind and Cutch coasts in the latter half of February, much earlier than usual, due to the excessive temperature in Sind and Upper India generally during that period. On the other hand, sea winds were slightly later in being established on the Bengal coast.

The following table gives the mean actual and average velocity of the air movement in different provinces during this period :—

District.	Mean air movement in miles during cold weather period.		
	Mean actual.	Mean normal.	Percentage variation.
Bihar	88	67	+31
Chota Nagpur	174	137	+27
Assam	49	66	−26
North-Western Provinces . . .	54	63	−14
Punjab	46	50	− 8
Rajputana	101	121	−17
Central India	66	65	+ 1
Berar	112	88	+27
Central Provinces	84	71	+18
Deccan	156	140	+11

II. The Hot Weather Period.—April 1895 was slightly more disturbed with thunderstorms in North-Eastern and Central India than usual, and temperature was approximately normal in March, but in slight defect in April. The first advance of strong humid winds to Tenasserim and Burma occurred earlier than usual in the last week of April, and light to moderate south-west winds held steadily in May over that area. Weather was disturbed with numerous series of thunderstorms, and temperature was generally in slight to moderate defect, except in Upper India, where it was in slight excess. The hot weather conditions in May were more intensely marked than usual in the Punjab, Sind, Rajputana, the Gangetic Plain, the Central Provinces and the North Deccan. The excess

on the mean of the month was greatest in the Punjab, Sind and North-West Rajputana. The chief feature of the last week of May was the prevalence of very strong westerly hot winds in the Gangetic Plain, West Bengal and Chota Nagpur, accompanying abnormally high temperature conditions in Bihar, Chota Nagpur and West Bengal.

The chief abnormal features of the air movement in May differed considerably from those of the preceding two months, and are given below :—

(1) Winds were considerably stronger and steadier than usual at Port Blair and in Burma. The following gives mean data :—

District.	Mean wind velocity in miles per diem.		Wind steadiness.	
	Mean actual, May 1895.	Mean normal, May.	Mean actual, May 1895.	Mean normal, May.
Port Blair . . .	291	166	77	48
Burma (Coast) . .	173	141	69	52
Arakan	109	88	19	31

(2) Winds were stronger and steadier than usual in Bengal and the Gangetic Plain and much more directly from the west in the interior than usual, more especially in West and Central Bengal. The following data show the increased strength and steadiness of the winds in that area :—

Province.	Mean wind velocity in miles per diem.		Wind steadiness.	
	Mean actual, May 1895.	Mean normal, May.	Mean actual, May 1895.	Mean normal, May.
Bengal	198	184	60	54
Chota Nagpur . . .	258	210	14	15
Bihar	171	132	73	49
North-Western Provinces .	119	90	30	17

(3) Winds were much stronger than the normal in Rajputana, Central India, Kathiawar, Gujarat, Berar and the Central Provinces, and were more directly from the west than usual on the mean of the month over the greater part of that area, as in the Gangetic Plain. The following gives data illustrating the increased strength and steadiness of the winds in these areas :—

Province.	Wind velocity in miles per diem.		Wind steadiness.	
	Mean actual, May 1895.	Mean normal, May.	Mean actual, May 1895.	Mean normal, May.
Rajputana . . .	268	220	82	63
Central India . . .	179	140	49	48
Berar	279	246	87	62
Central Provinces . .	191	148	68	52

(4) Winds were slightly weaker in the Punjab and the Bombay and Madras coast districts and were normal in the South Deccan. The variations from the normal conditions were, however, small and apparently unimportant, except so far as they showed a marked contrast to those obtaining in Northern and Central India.

The preceding discussion hence suggests that the air movement in Northern and Central India in May was the ordinary hot weather circulation considerably strengthened and slightly modified in direction by the abnormal temperature and pressure conditions which prevailed throughout nearly the whole month in Northern India.

III. The South-West Monsoon Period.—The Arabian Sea current was considerably delayed and was not established on the Malabar and Konkan coasts until the 10th to the 12th of June. It advanced with great rapidity into the interior and gave general rain to the Central Provinces and Central India on the 12th and 13th and to Rajputana and the South-East Punjab on the 13th and 14th. The advance of the current over the Arabian Sea was made somewhat more quickly than usual. A feeble cyclonic storm formed off the Konkan coast on the 13th and 14th and drifted parallel to the coast during the next three days and broke up off the Mekran coast on the 21st and 22nd.

The south-west monsoon current was established in the Bay during the third week of June. A cyclonic storm formed in front of this advance. It was followed by a second storm in the last week of the month, which marched north-westwards from the head of the Bay to the central districts of the North-Western Provinces.

The most noteworthy feature of the lower air movement in India and the neighbouring seas during the south-west monsoon of 1895 was the weakness of the Bombay or Arabian Sea current. The Bay current was above its normal strength to some extent throughout the greater part of the period. These characteristics are fully shown by the comparative data in the table below derived for each

current from the anemometric observations of four coast and four inland stations under the full influence of the two currents:—

Month.	BAY OF BENGAL CURRENT. Percentage variation of mean air movement from the normal at		BOMBAY CURRENT. Percentage variation of mean air movement from the normal at	
	Four coast stations.	Four inland stations.	Three coast stations.	Four inland stations.
June	+8	−6	−5	−7
July	+23	+3	−9	−5
August	+18	+5	−7	+4
September	+30	+1	−16	−5
Mean of period	+20	+1	−9	−3

The following table gives corresponding data for the steadiness of the two currents in the coast districts of India:—

Month.	BAY OF BENGAL CURRENT. Variation of mean steadiness percentage from the normal		BOMBAY CURRENT. Variation of mean steadiness percentage from the normal	
	Coast stations.	Inland stations.	Coast stations.	Inland stations.
June	−6	+2	−9	−7
July	+4	+1	−3	−3
August	+9	+1	+7	+5
September	−15	−20	+4	−1

The comparative data given in the following table of the mean actual and normal force of the winds derived from the meteorological information contained in the logs of vessels navigating the Indian seas indicate that the air movement was below the normal to a slight extent (5 per cent.) throughout the period in the Bay of Bengal, and to a moderate extent (12 per cent.) in the Arabian Sea. The actual data are chiefly derived from vessels following four or five tracks in these seas, and hence do not necessarily indicate a variation common to the whole area. They, however, almost certainly establish that the currents in both seas were somewhat below their normal strength and that the decrease of strength was most marked in the Arabian Sea:—

Month.	Mean daily force of wind (Beaufort's notation) in the					
	Bay of Bengal.			Arabian Sea.		
	Actual.	Normal.	Variation from normal.	Actual.	Normal.	Variation from normal.
June	3·9	4·0	−0·1	4·0	4·5	−0·5
July	4·0	4·0	0	4·3	4·6	−0·3
August	3·8	4·0	−0·2	3·8	4·3	−0·5
September	3·3	3·7	−0·4	2·9	3·5	−0·6
Mean of period	3·8	3·9	−0·2	3·8	4·2	−0·5

The following table gives the percentage variation of the strength of the winds from the normal, month by month, in different provinces:—

Division.	Percentage variation.				
	June. 1895.	July 1895.	August 1895.	September 1895.	Mean of period.
Bengal	−6	+8	+6	+7	+4
Bihar	+52	+12	+43	+2	+27
Chota Nagpur	+18	+10	+6	+2	+9
North-Western Provinces and Oudh.	+11	+14	+11	−7	+7
Punjab	+10	+2	+21	+7	+10
Rajputana	−10	+6	−1	−9	−4
Central India	−23	−17	−10	−21	−18
Central Provinces	+4	0	+19	+22	+11
Bombay Coast	−1	−10	−4	−25	−10
Deccan	−6	−9	−4	−6	−6

The following gives a summary of the more important variations of the mean air movement, month by month, from the normal during this period.

June (*a*)—Winds were more westerly than usual at Port Blair and in Lower Burma.

(*b*)—Winds were more easterly than usual in Bengal.

(*c*)—Winds were more strong and steady throughout the month in the Gangetic Plain.

(*d*)—Winds were slightly below their normal strength in Rajputana, Central India and the Deccan.

(*e*)—Strong monsoon winds blew across the west coast from the 18th to the 25th, but on the mean of the month winds were below their average strength.

July (*a*)—The Bay monsoon current was almost certainly stronger on the average of the whole month than usual.

(*b*)—Winds were slightly stronger and more westerly than usual at Port Blair and the Burma coast stations.

(*c*)—Winds were stronger in Bengal and more

westerly than usual at the inland stations, indicating that the monsoon current was determined more largely than usual to Assam and North and East Bengal.

(*d*)—Winds were unsteady in the western half of the Gangetic Plain and East Punjab.

(*e*)—The Bombay monsoon current was somewhat below its normal strength.

(*f*)—Winds were slightly stronger in Southern India and more westerly than usual.

(*g*)—Winds were more westerly than usual in Rajputana and Central India.

August—Winds were more westerly and stronger than usual at Port Blair and in Lower Burma.

(*b*)—Winds in Bengal and the Gangetic Plain were on the mean of the month slightly stronger and steadier than usual.

(*c*)—Winds were more northerly than usual in Chota Nagpur and South Bihar, due to the eastern extremity of the trough of low pressure lying further south than usual in the southern districts of Chota Nagpur.

(*d*)—The Bombay current was very slightly below its normal strength but winds in the Deccan and West Coast districts were slightly less southerly than usual.

September—Winds were more westerly than usual at Port Blair and in Lower Burma.

(*b*)—Winds contained an abnormally strong westerly element at the Bengal stations.

(*c*)—Winds were very unsteady and variable in Bihar and Chota Nagpur.

(*d*)—Light steady westerly winds prevailed during the month in the Punjab and greater part of the North-Western Provinces.

(*e*)—Winds were more northerly and less westerly than usual in Berar, the Central Provinces and Deccan.

(*f*)—The Bombay current was below its normal strength to a marked extent.

(*g*)—The Bengal current was of normal strength, but was determined chiefly to North-Eastern India and Burma.

The chief features of the south-west monsoon air movement were hence as follows:—

(1) The Bay current was throughout the period very slightly weaker than usual.

(2) It was determined in the south of the Bay to a greater extent than usual to Tenasserim, and less to Upper Burma.

(3) It was at the head of the Bay during the months of June and August, and the first and last weeks of July directed more largely than usual to Upper India.

(4) The Bombay current was generally weaker than usual throughout the whole season.

(5) During the greater part of the season it was determined more largely to the Peninsula and less to Upper India than usual.

IV. The Retreating South-West Monsoon Period.—The south-west monsoon humid currents withdrew from Upper India at the end of August, and hence nearly a month earlier than usual. Pressure increased so rapidly in Upper India in the first week of September that the first storm of that month advanced into the Deccan, a course which is rarely taken by storms in September, but is one of the normal tracks in October. The rains ceased in North-Eastern India in the first week of October, nearly a month before their normal termination

The monsoon currents hence withdrew about a month earlier than usual from the whole of Northern and Central India. The retreating monsoon was normal in strength in the south and centre of the Bay in October, but was feeble in November, and during nearly the whole of December north-east winds prevailed over the Bay area except in the extreme south.

The following gives a summary of the chief features of the air movement in India, month by month, from October to December. The chief features in October were:—

(1) Winds in Bengal were from north-westerly directions on the mean of the month, or practically from their cold weather directions.

(2) Winds were more westerly and slightly stronger than usual in the Gangetic Plain.

(3) Northerly winds prevailed to an abnormal extent at the hill stations in Northern India.

(4) Winds were on the whole more easterly than usual in the Peninsula.

The chief abnormal features of the air movement were due to the early termination of the monsoon rains in, and withdrawal of the monsoon currents from, Northern India.

The chief features of the mean air movement in India during the month of November were:—

(1) Winds were slightly more easterly or less westerly in Bengal.

(2) Winds were remarkably unsteady and feebler than usual in the Gangetic Plain, Central India, Berar and the Central Provinces.

(3) Winds were of normal steadiness but feebler than usual in the centre and south of the Peninsula.

The data for the Bay of Bengal indicate that north-east winds prevailed during the month over the north, centre and west of that area. Winds were very unsteady and variable in the south-east of the Bay, and were generally from west in the extreme south.

The chief features of the mean winds of December were—

(1) Winds were very unsteady, but considerably stronger than usual at Port Blair and the

Burma coast stations. The marine data show that weather was more disturbed than usual in the south-east of the Bay.

(2) Winds were slightly steadier, but of normal strength in Bengal and the Gangetic Plain.

(3) Winds were stronger and steadier and normal in direction in Berar, the Central Provinces and the Deccan.

(4) Winds were much more northerly than usual at the Madras coast stations.

Humidity.

The four following tables (Tables VI to IX) give variation data of aqueous vapour pressure and relative humidity for each month of the year and for the year:—

1st.—For the eighteen meteorological areas adopted in the geographical summaries of meteorological data in the annual reports issued by the Department previous to 1891.

2nd.—For ten meteorological provinces of the Empire.

TABLE VI.—*Geographical Summary of the aqueous vapour pressure data of Table II in the monthly weather reviews of 1895.*

Meteorological Province.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
North-WestHimalayas	5—7	—·006	—·003	+·010	+·012	+·022	+·071	—·036	—·019	—·026	—·053	+·003	—·025	—·004
Sikkim Himalaya and Nepal.	2	+·003	+·015	+·015	+·003	+·065	+·011	—·009	+·012	+·007	—·041	+·031	—·018	+·008
Punjab Plains . .	4	—·009	+·039	+·042	+·040	—·007	+·129	—·061	—·001	—·072	—·075	+·013	—·030	+·001
Gangetic Plain .	7—8	+·041	+·048	+·030	+·041	+·063	+·075	—·021	—·005	—·017	—·092	+·050	—·032	+·015
Western Rajputana .	2—3	—·052	—·013	—·027	+·015	—·038	+·045	+·012	+·044	+·001	—·050	+·010	—·010	—·005
Eastern Rajputana and Central India.	4—5	+·075	+·063	+·046	+·077	+·057	+·075	+·016	+·020	+·003	—·081	+·040	+·002	+·033
Nerbudda Valley .	3	+·067	+·060	+·060	+·051	+·022	+·018	+·014	+·006	+·020	—·087	—·004	—·041	+·016
Chota Nagpur . .	1	+·018	+·010	—·012	+·074	+·041	+·018	—·019	—·016	—·043	+·012	+·018	—·015	+·007
Lower Bengal . .	5	—·003	—·038	—·074	—·058	+·020	—·029	—·014	—·018	—·012	—·093	+·032	—·053	—·028
Assam and Cachar .	3	+·028	+·005	+·002	—·034	+·059	+·029	—·007	+·007	+·011	—·068	+·007	—·011	+·002
Orissa . . .	2	+·020	—·007	—·067	—·051	+·011	—·003	+·019	+·008	+·009	—·011	+·039	—·064	—·008
Central Provinces (South) and Berar.	5	+·034	+·083	+·014	+·085	+·074	+·026	+·005	+·003	+·015	+·057	0	—·065	+·028
Konkan . . .	3	+·013	—·027	+·006	—·016	—·023	+·015	—·016	—·011	—·013	—·006	+·003	—·078	—·013
Malabar coast . .	1	—·005	—·032	—·004	—·021	+·007	+·025	—·025	+·013	+·021	+·034	—·007	—·013	—·001
Deccan, Hyderabad and Mysore.	5—6	+·018	+·017	—·006	+·009	+·002	—·013	—·016	—·011	—·016	+·012	—·031	—·059	—·008
East Coast and Carnatic.	4	+·014	+·001	—·045	—·017	—·013	+·003	—·009	+·013	+·011	+·029	+·030	—·032	—·001
Arakan and Pegu .	4	—·004	—·025	—·028	—·005	+·035	+·044	+·030	+·013	+·029	—·007	—·045	+·018	+·005
Bay Islands . .	1	—·006	—·065	—·030	0	—·006	+·021	0	—·007	+·006	+·024	—·071	+·051	—·007
Extra Tropical India.	37—40	+·020	+·021	+·012	+·019	+·034	+·052	—·016	+·001	—·014	—·073	+·023	—·026	+·004
Tropical India .	25—26	+·015	+·009	—·016	+·009	+·017	+·012	—·001	+·002	+·005	+·018	—·009	—·040	+·002
Whole India . .	63—66	+·018	+·016	+·001	+·015	+·027	+·036	—·010	+·001	—·006	—·037	+·010	—·032	+·003

TABLE VII.—*Geographical Summary of the humidity data of Table II in the monthly weather reviews of 1895.*

METEOROLOGICAL PROVINCE.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
North-West Himalayas.	5–7	+ 6	− 2	+ 2	+ 4	− 5	+11	− 5	− 2	− 7	− 8	+ 1	− 5	− 1
Sikkim, Himalaya and Nepal.	2	+ 4	+ 5	+ 5	+ 3	+ 3	0	+ 2	+ 3	0	+ 1	+ 4	− 5	+ 2
Punjab Plains .	4	+ 1	+ 3	+ 5	+ 2	− 7	+11	− 6	+ 2	− 7	− 7	− 3	− 5	− 1
Gangetic Plain .	7–8	+ 9	+ 7	+ 4	+ 7	+ 2	+ 9	− 2	0	− 4	− 9	0	− 6	+ 1
Western Rajputana .	2–3	− 4	− 1	+ 1	+ 3	+ 2	+ 6	− 4	+ 2	− 1	− 5	− 3	− 3	− 1
Eastern Rajputana and Central India.	4–5	+13	+ 8	+ 8	+ 6	− 1	+ 9	− 3	+ 1	− 3	− 8	− 2	+ 1	+ 2
Nerbudda Valley .	3	+ 8	+ 5	+10	+ 6	− 1	+ 5	− 1	0	0	− 8	− 4	− 6	+ 1
Chota Nagpur . .	1	− 1	− 2	− 2	+ 8	+ 1	+ 1	− 2	− 2	− 9	−11	− 4	− 7	− 2
Lower Bengal . .	5	− 2	− 6	− 7	− 3	− 3	− 3	− 3	− 2	− 5	− 7	− 2	− 7	− 4
Assam and Cachar .	3	+ 2	− 1	+ 2	− 4	+ 1	− 4	+ 4	+ 1	0	− 2	0	− 2	0
Orissa . . .	2	− 1	− 3	− 8	− 4	− 3	+ 2	− 1	+ 2	− 2	0	+ 1	− 7	− 2
Central Provinces (South) and Berar.	5	+ 2	+11	+ 2	+ 8	+ 3	+ 2	− 2	− 1	− 1	− 6	− 5	−10	0
Konkan . . .	3	+ 2	− 3	0	− 2	− 3	− 3	− 1	− 2	− 2	− 3	− 4	−10	− 3
Malabar Coast .	1	− 5	− 5	− 5	− 4	− 4	− 5	− 1	− 1	− 2	0	− 7	− 5	− 4
Deccan, Hyderabad and Mysore.	5–6	+ 4	+ 5	+ 1	+ 6	+ 1	− 3	− 1	− 1	− 1	+ 2	− 3	− 5	0
East Coast and Carnatic.	4	+ 1	+ 1	0	+ 1	− 3	− 2	+ 1	+ 2	+ 1	+ 4	+ 1	− 4	0
Arakan and Pegu .	4	− 2	− 3	− 3	0	+ 5	− 1	− 1	− 1	− 1	− 1	− 3	+ 1	− 1
Bay Islands . .	1	0	− 4	− 1	0	− 1	− 1	− 2	0	− 1	− 5	− 6	+ 2	− 2
Extra Tropical India	38–40	+ 5	+ 2	+ 3	+ 3	− 2	+ 6	− 3	0	− 4	− 7	− 1	− 4	0
Tropical India . .	25–26	+ 1	+ 2	− 1	+ 2	0	− 1	− 1	0	− 1	− 1	− 3	− 5	− 1
Whole India . .	64–66	+ 3	+ 2	+ 2	+ 3	− 1	+ 3	− 2	0	− 3	− 5	− 2	− 5	0

TABLE VIII.—*Variations of the mean monthly aqueous vapour pressure in ten meteorological provinces of India in 1895.*

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May	June.	July.	August.	September.	October.	November.	December.	Year.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma Coast and Bay Islands	−·017	−·032	−·022	+·011	+·024	+·031	+·026	+·010	+·025	+·021	−·061	+·031	+·004
Assam	+·028	+·005	+·002	−·034	+·059	+·029	−·007	+·007	+·014	−·068	+·007	−·011	+·003
Bengal and Orissa . .	+·006	−·034	−·066	−·057	+·016	−·009	−·002	−·009	−·002	−·072	+·029	−·049	−·021
Gangetic Plain and Chota Nagpur.	+·031	+·040	+·020	+·042	+·057	+·013	−·012	−·009	−·015	−·075	+·036	−·034	+·008
Upper Sub-Himalayas . .	+·037	+·049	+·040	+·049	+·053	+·154	−·045	+·002	−·044	−·086	+·034	−·038	+·017
Indus Valley and North-West Rajputana.	−·055	+·022	+·024	+·035	−·015	+·081	−·019	+·038	−·005	−·069	+·060	0	+·008
East Rajputana, Central India and Gujarat.	+·041	+·030	+·010	+·057	+·040	+·073	−·017	+·005	−·039	−·088	+·044	−·009	+·012
Deccan	+·054	+·067	+·035	+·057	+·046	+·026	+·011	+·008	+·011	−·048	+·003	−·044	+·019
West Coast	+·009	−·028	+·003	−·018	−·016	+·017	−·018	−·007	−·005	+·003	0	−·062	−·010
South India	+·011	+·003	−·026	−·002	−·010	−·006	−·017	−·003	−·002	+·017	−·001	−·047	−·007

TABLE IX.—*Variations of the mean monthly humidity from the normal in ten meteorological provinces of India in 1895.*

Meteorological Province.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma Coast and Bay Islands	− 3	− 3	− 3	+ 1	+ 4	− 1	− 1	0	0	− 2	− 5	+ 1	− 1
Assam	+ 2	− 1	+ 2	− 4	+ 1	− 4	+ 4	+ 1	0	− 2	0	− 2	0
Bengal and Orissa . .	− 2	− 5	− 7	− 3	− 3	− 2	− 2	− 1	− 4	− 5	− 1	− 6	− 3
Gangetic Plain and Chota Nagpur.	+ 5	+ 5	+ 3	+ 7	+ 2	+ 1	− 1	0	− 4	−10	− 2	− 7	0
Upper Sub-Himalayas . .	+11	+ 6	+ 4	+ 6	− 2	+17	− 5	+ 3	− 6	− 8	+ 1	− 7	+ 2
Indus Valley and North-West Rajputana.	− 9	0	+ 4	+ 1	− 6	+ 5	− 4	+ 3	− 1	− 7	0	− 2	− 1
East Rajputana, Central India and Gujarat.	+11	+ 5	+ 4	+ 5	0	+ 9	− 5	+ 1	− 7	− 8	0	− 1	+ 1
Deccan	+ 7	+ 9	+ 6	+ 6	+ 1	+ 3	− 1	0	0	− 4	− 3	− 5	+ 2
West Coast	0	− 3	− 1	− 2	− 3	− 3	− 1	− 3	− 2	− 3	− 5	− 9	− 3
South India	+ 1	+ 1	0	+ 3	− 2	− 3	0	0	− 1	+ 3	− 2	− 5	0

I. The Cold Weather Period —The following is a statement of the more important humidity conditions of the period :—

(1) The air was slightly drier in Burma, Bengal and Chota Nagpur during this period. The following gives comparative data :—

Station.	Variation of mean absolute humidity from normal in—		Variation of mean relative humidity from normal in—	
	January 1895.	February, 1895.	January 1895.	February 1895.
	″	″		
Port Blair . . .	−·006	−·065	0	−4
Burma	−·020	−·021	−4	−3
Bengal	+·001	−·043	−2	−6
Chota Nagpur . .	+·018	+·010	−1	−2

The deficiency in the amount of aqueous vapour in the air was hence generally small to moderate in amount in this area. It was locally large in West Bengal during the month of February as is indicated by the data of the following table :—

Station.	Absolute humidity.		
	Actual, February 1895.	Normal, February.	Variation from normal.
	″	″	
Calcutta	·407	·487	−·080
Berhampore	·378	·394	−·016
Saugor Island . . .	·552	·623	−·071

(2) The air was damper over the large area including Bihar, the North-Western Provinces, the Punjab, Rajputana, Central India, the Central Provinces and Berar, and also in Assam. The excess was most marked in Central India, the Central Provinces and North-Western Provinces. The following table furnishes comparative data for this large area of increased humidity in January and February 1895 :—

Area.	Variation of mean absolute humidity from normal in—		Variation of mean relative humidity from normal in—	
	January 1895.	February 1895.	January 1895.	February 1895.
	″	″		
Bihar	+·021	+·025	+ 3	+ 2
Assam	+·028	+·005	+ 2	− 1
North-Western Provinces and Oudh.	+·047	+·056	+11	+ 8
Punjab	−·009	+·039	+ 1	+ 2
Rajputana . . .	+·021	+·004	+ 8	+ 1
Central India . . .	+·098	+·092	+15	+14
Bombay	+·022	0	+ 4	+ 3
Central Provinces . .	+·068	+·076	+ 8	+ 8
Berar	+·019	+·075	+ 1	+12

(3) The air was slightly damper than usual at the hill stations in Upper India and Baluchistan in January, but was abnormally dry in February. The following data

illustrate the contrast between the humidity conditions in the hill districts in the two months :—

Station.	Variation of mean absolute humidity from normal in		Variation of mean relative humidity from normal in	
	January 1895.	February 1895.	January 1895.	February 1895.
	"	"		
Quetta	−·023	−·009	+4	−13
Murree	−·007	−·016	+3	−14
Simla	−·008	−·014	+6	− 3

The preceding data indicate that the absolute humidity differed little from the normal and that the variations in the two months were chiefly temperature effects, the temperature variations in the two months being opposite in character

(4) The air was slightly drier than usual in the west coast and Mysore, but considerably damper in the Deccan and Madras Coast districts. The variations were generally small, and were chiefly important on account of their persistency. The following table gives data :—

Area.	Variation of mean absolute humidity from normal in		Variation of mean relative humidity from normal in	
	January 1895.	February 1895.	January 1895.	February 1895.
	"	"		
West Coast . . .	+·009	−·028	0	−3
Deccan	+·054	+·067	+7	+9
Madras Coast . . .	+·057	+·028	+7	+3
Mysore and Coorg . .	−·007	−·018	0	−2

The following table gives data for four stations in the coast districts of Malabar and Konkan : —

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	January 1895.	February 1895.	Mean of period, January and February 1895.	January 1895.	February 1895.	Mean period, January and February 1895.
	"	"	"			
Bombay . .	−·026	−·034	−·030	−2	−3	−3
Ratnagiri . .	+·031	−·036	−·003	+5	−2	+2
Karwar . .	+·035	−·011	+·012	+3	−3	0
Cochin . .	−·005	−·032	−·019	−5	−5	−5

It may be noted that the humidity percentage at Leh was slightly above the normal in February, as was also the case in January, and hence the great dryness of the air which prevailed in Northern India in February did not extend across the Himalayas into Thibet.

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	January 1895.	February 1895.	Mean of period January and February 1895.	January 1895.	February 1895.	Mean of period, January and February 1895.
	"	"	"			
Leh . . .	−·027	−·018	−·023	+3	+6	+5

II. The Hot Weather Period.—The chief features of the humidity conditions of this period were similar to those of the preceding period. The variations were generally moderate in amount in March and April. The chief feature of May was a period of excessive heat and dryness of the air in the third and fourth weeks of the month over the greater part of North-Eastern India. Data of this period are given below. The chief features of the variations of the mean humidity conditions from the normal during the hot weather period were as follows :—

(1) The air was slightly less humid at the Burma stations in March and was of normal humidity in April, and more humid than usual in May, as is shown by the following data :—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Rangoon . .	−·020	+·008	+·023	+·004	−2	0	+6	+1
Diamond Island .	−·051	−·006	−·012	−·023	−5	0	+5	0
Akyab . . .	+·015	+·043	+·091	+·050	0	+4	+7	+4

(2) Humidity was on the mean of the period considerably below the normal in Bengal and Orissa, but was in slight excess in Chota Nagpur.

Area.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Bengal . .	−·066	−·059	+·018	−·036	−7	−3	−2	−4
Orissa . .	−·067	−·051	+·011	−·036	−8	−4	−3	−5
Chota Nagpur .	−·012	+·074	+·041	+·034	−2	+8	+1	+2

The deficiency was most marked in South-West Bengal at the stations of Calcutta, False Point, Dacca and Berhampore, as is shown by the data of the following statement :—

Station.	Variation of mean relative humidity from normal in			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
Calcutta	−14	− 7	− 7	− 9
Berhampore	− 7	− 2	− 4	− 4
False Point	− 7	− 7	− 4	− 6
Dacca	− 6	− 5	− 1	− 4

The increased dryness of the air was hence most strongly exhibited at Calcutta.

(3) The air was, on the mean of the period, damper than usual in the large area including Bihar, Chota Nagpur, the North-Western Provinces, Rajputana, Central India, Berar and the Central Provinces, as is indicated by the following data :—

Area.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Bihar	−·004	+·017	−·056	−·014	0	+ 5	+ 5	+ 3
Chota Nagpur	−·012	+·074	+·041	+·034	− 2	+ 8	+ 1	+ 2
N.-W. Provinces and Oudh.	+·042	+·049	+·066	+·052	+ 6	+ 8	+ 1	+ 5
Rajputana	−·009	+·058	+·022	+·024	+ 2	+ 5	+ 1	+ 3
Central India	+·072	+·099	+·061	+·077	+11	+10	− 1	+ 7
Berar	+·031	+·036	+·001	+·023	+ 4	+ 4	+ 1	+ 3
Central Provinces	+·048	+·085	+·074	+·069	+ 8	+ 8	+ 2	+ 6

The increased humidity in this area was most strongly exhibited at the following stations in the Central Provinces, Central India and the eastern districts of the North-Western Provinces :—

Station.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Allahabad	+·033	+·042	+·049	+·041	+ 5	+ 6	0	+ 4
Nagpur	+·077	+·252	+·238	+·189	+ 8	+20	+11	+13
Raipur	−·039	+·084	+·114	+·053	− 3	+ 8	+ 4	+ 3
Jubbulpore	+·088	+·093	+·022	+·068	+16	+11	− 2	+ 8
Sutna	+·106	+·099	+·087	+·097	+14	+10	+ 2	+ 9
Hoshangabad	+·098	+·083	+·079	+·087	+13	+ 8	+ 3	+ 8

(4) The air was slightly damper in the Punjab in March and April, but was much drier than usual in May, as was also the case in Baluchistan in April and May. The following gives data for these two areas:—

Area.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Baluchistan (Quetta)	+.006	−·023	−·047	−·021	− 1	− 9	− 9	− 6
Punjab	+·042	+·040	+·017	+·033	+ 5	+ 2	− 7	0

The mean humidity of Peshawar for the month of May was 12 below the normal.

(5) The air was slightly damper than usual in March and April at the hill stations in Upper India, but was abnormally dry in May. The decreased humidity in May at these stations was almost solely a result of the increased temperature of the period. The following gives data in illustration :—

Station.	Absolute humidity.				Relative humidity.			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Leh	+·020	+·010	+·049	+·026	+ 9	+ 4	− 2	+ 4
Kailang	−·002	−·036	−·010	−·016	− 1	− 7	−10	− 6
Murree	+·003	+·002	−·032	−·009	+ 1	− 3	−16	− 6
Simla	−·020	−·015	−·004	−·013	− 2	+ 4	− 5	− 1
Ranikhet	+·011	+·028	+·063	+·034	0	+11	+ 1	+ 4
Quetta	+·006	−·023	−·047	−·021	− 1	− 9	− 9	− 6

(6) The air was generally less humid than usual in the Deccan, Southern India and the West Coast districts. The increased dryness of the air was most strongly marked in the West Coast districts, for which data are given below :—

Station.	Absolute Humidity.				Relative Humidity.			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Bombay . . .	—·011	—·029	—·042	—·027	—2	—3	—3	—3
Ratnagiri . . .	+·011	—·022	+·001	—·003	+1	—1	—1	0
Karwar . .	+·017	—·018	—·028	—·010	+1	—1	—5	—2
Cochin . . .	—·004	—·021	+·007	—·006	—5	—4	—4	—4

The following gives corresponding data for representative stations in Southern India :—

Station.	Absolute Humidity.				Relative Humidity.			
	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.	March 1895.	April 1895.	May 1895.	Mean of period, March to May 1895.
	"	"	"	"				
Madras . . .	—·035	—·018	+·028	—·008	0	—3	—2	—2
Bangalore . .	—·068	+·018	+·021	—·010	—5	+6	+1	+1
Salem . . .	—·043	—·006	—·048	—·032	+2	+4	—5	0
Trichinopoly . .	—·086	—·018	—·041	—·048	—5	0	—6	—4

A comparison of the variations of the humidity conditions of the hot and cold weather seasons shows that the following features were common to both seasons and were hence very persistent :—

(1) Increased dryness in Bengal and Orissa.

(2) Greater humidity than usual in the area including Bihar, the North-Western Provinces, Rajputana, Central India, Berar and the Central Provinces.

(3) Decreased humidity in the West Coast districts and Southern India.

The driest periods during the hot weather season in Northern and Central India were from the 6th to the 10th April, the 2nd to the 4th of May and the 25th to the 28th of May. The lowest humidities recorded during the season were as follows :—

			%
7th April, 4 P.M.	Deesa		4
9th " "	Khandwa . . .		4
10th " "	Buldana . . .		3
4th May "	Nowgong . . .		2
" " "	Deesa		4
" " "	Pachmarhi . . .		4

Humidities as low as 10 per cent. are of frequent occurrence in the hot weather and as low as 5 per cent. of occasional occurrence. At the driest stations (more especially Deesa, Pachmarhi, Khandwa, Nowgong, Pachpadra, Bickaneer and Jacobabad) humidities of 2 and 3 per cent. are usually registered on one or two occasions in each year.

III. The South-West Monsoon Period.—The rains commenced upwards of a week later than usual on the Bombay Coast, and about the normal date in Bengal. The monsoon currents advanced rapidly into the interior as far as the East Punjab and were for a short time of normal strength. They fell off very rapidly at the end of June and were very weak in July and the rainfall of the month was much below the normal, except in Burma, Assam, Bihar and the Peninsula. The currents increased at the commencement of August and moderate general rain was received during that month. They retreated from Upper India in the first week of September. The rainfall of the month of September was very irregularly distributed, the Deccan receiving a large excess and Burma a moderate excess. Over the remainder of the country the rainfall was more or less below the normal. The humidity conditions of the period were determined by the distribution of the rainfall. The following gives the more important features :—

(1) The air was slightly drier than usual in Arakan and Assam at the commencement of the monsoon in June; but was more humid in July, August and September, and hence on the mean of the whole period humidity was normal or in slight excess.

Province.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	June 1895.	July 1895.	August 1895.	September 1895.	June 1895.	July 1895.	August 1895.	September 1895.
	"	"	"	"				
Burma . .	+·034	+·035	+·015	+·031	0	—1	0	0
Assam . .	+·029	—·007	+·007	+·014	—4	+4	+1	0

(2) The air contained less vapour than usual throughout the whole season in Bengal. This is most clearly shown by the following data for three representative stations, *viz.*, Calcutta, Dacca and Burdwan :—

Station.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	June 1895.	July 1895.	August 1895.	September 1895.	June 1895.	July 1895.	August 1895.	September 1895.
	"	"	"	"				
Calcutta . .	—·040	—·026	—·025	—·034	—1	—4	—1	—7
Dacca . .	—·032	—·017	—·025	—·015	—6	—2	—2	—4
Burdwan . .	—·014	—·023	—·022	—·011	+1	—3	—3	—5

(3) Humidity was in excess in June in the North-Western Provinces, Punjab, Rajputana, Central India and the Central Provinces, but was generally more or less in defect during the remainder of the monsoon. The deficiency was marked in July and September, as is shown by the following data :—

Province.	Variation of mean relative humidity from normal in—			
	June 1895.	July 1895.	August 1895.	September 1895.
North-Western Provinces and Oudh.	+14	—3	0	—5
Punjab	+11	—6	+2	—7
Rajputana . . .	+ 6	—5	+1	—8
Central India . . .	+14	—2	+2	—1
Berar	— 1	—2	—3	+2
Central Provinces . .	+ 6	—1	+1	—2

The following gives comparative data for the stations at which the deficiency was most pronounced during the rainy season :—

Station.	Variation of mean relative humidity from normal in—			
	June 1895.	July 1895.	August 1895.	September 1895.
Allahabad . . .	+10	— 5	—3	— 8
Jeypore	+ 6	—10	—2	—11
Agra	+15	— 9	0	— 7
Lahore	+16	— 8	+4	— 6
Mooltan	+ 3	— 6	+3	— 8
Deesa	+ 9	— 4	—1	—12

The variations of the humidity conditions at the hill stations in North-Western India and Kashmir were throughout the season very similar to those of the neighbouring plains stations, as is shown by the following variation data :—

Station.	Variation of mean relative humidity from normal in—			
	June 1895.	July 1895.	August 1895.	September 1895.
Leh	— 1	—6	—6	—10
Murree	+14	—7	—1	—10
Simla	+14	—7	0	— 7
Ranikhet . . .	+15	—5	+2	— 4
Darjeeling . . .	— 1	+1	+3	— 1

(5) Humidity was in slight defect in the West Coast districts and normal or in slight to considerable defect in the Deccan and South India. The following gives comparative data for these areas :—

Political Division or Area.	Variation of mean absolute humidity from normal in—					Variation of mean relative humidity from normal in—				
	June 1895.	July 1895.	August 1895.	September 1895.	South-west monsoon period, 1895.	June 1895.	July 1895.	August 1895.	September 1895.	South-west monsoon period, 1895.
	"	"	"	"	"					
Bombay Coast	+·015	—·016	—·011	—·013	—·006	—3	—1	—2	—2	—2
Bombay Deccan.	—·009	—·004	+·001	—·012	—·006	—2	—1	+1	+2	0
Madras Deccan.	—·065	—·061	—·076	—·078	—·070	—6	—4	—7	—6	—6
Madras Coast	+·016	+·026	+·035	+·033	+·028	+1	+3	+6	+3	+3
South Madras and Mysore.	+·003	—·027	0	+·003	—·005	—4	—1	0	—1	—2

IV. The Retreating South-West Monsoon Period.—The distribution of rainfall of this period was very abnormal. The chief periods of rainfall were associated with the occurrence of cyclonic storms. There was one storm in October, which advanced to the head of the Bay. November was a very fine month, with little or no rain. One storm occurred in December, which advanced to the Arakan Coast. The whole period was drier than usual in almost all districts of India. The following gives a brief summary of the hygrometric conditions of the period in India :—

(1) Humidity was largely below the normal during the whole period in the Punjab, North-Western Provinces and Rajputana :—

Area.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
	"	"	"	"				
Punjab . .	—·079	+·013	—·031	—·032	— 7	— 3	—5	—5
N.-W. Provinces and Oudh	—·102	+·048	—·029	—·028	—11	— 2	—7	—7
Rajputana .	—·088	+·024	—·016	—·027	— 7	— 2	—1	—3

(2) Humidity was as largely in defect in North-Eastern

India (*i.e.*, Chota Nagpur, Bihar and Bengal) as in North-Western India :—

Area.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
	"	"	"	"				
Bihar . .	—·069	+·054	—·038	—·018	— 6	—1	—5	—3
Chota Nagpur	+·012	+·018	—·015	+·005	—11	—4	—7	—7
Bengal . .	—·092	+·025	—·045	—·037	— 6	—1	—5	—4

(3) Humidity was below the normal to a large extent in Berar and the Central Provinces :—

Area.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	October 1895	November 1895.	December 1895.	Mean of period, October to December 1895.	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
	"	"	"	"				
Berar . .	—·058	—·017	—·078	—·051	—6	—6	—12	—8
Central Provinces.	—·075	+·013	—·038	—·033	—8	—4	— 5	—6

(4) Humidity was almost as largely in defect in the West Coast districts as in Northern India :—

Area.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
	"	"	"	"				
Konkan . .	—·006	+·003	—·076	—·026	—3	—4	—9	—5
Malabar . .	+·034	—·007	—·013	+·005	0	—7	—5	—4

(5) Humidity was in slight defect in Assam and in slight to moderate defect in Burma and Southern India and was normal in the Deccan, as is shown by the following statement :—

Area.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	October 1895	November 1895.	December 1895.	Mean of period, October to December 1895.	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
	"	"	"					
Assam . .	—·068	+·007	—·011	—·024	—2	0	—2	—1
Burma . .	+·019	—·058	+·024	—·005	—1	—5	0	—2
South India .	+·017	—·001	—·047	—·010	+3	—2	—5	—1
Bombay Deccan	+·021	—·019	—·050	—·016	+4	—2	—2	0

The following table gives comparative data showing the broad features of the humidity conditions of the period :—

Area.	Variation of mean absolute humidity from normal in—				Variation of mean relative humidity from normal in—			
	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
	"	"	"	"				
Extra Tropical India.	—·073	+·023	—·026	—·025	—7	—1	—4	—4
Tropical India .	+·018	—·009	—·040	—·010	—1	—3	—5	—3
Whole India .	—·037	+·010	—·032	—·020	—5	—2	—5	—4

Temperature was normal in October and December and in moderate excess in November. Hence the increased dryness of the air during this period was due almost solely to the decreased amount of aqueous vapour present in the air and was not a temperature effect.

The year.—The means for the whole year given in the final columns of Tables VI and VII show that—

1st.—The mean absolute and relative humidities of the year were in slight defect in Upper and Central Burma and Orissa and in considerable defect in Bengal.

2nd.—The mean relative humidity values of the year were in slight to moderate defect in the Punjab, Berar and the Central Provinces and in slight excess in the North-Western Provinces. The amount of aqueous vapour was very slightly above the normal and hence the decreased humidity was almost solely a temperature effect in these areas.

3rd.—The mean absolute and relative humidities were on the mean of the year practically normal in the Himalayan hill districts, West Rajputana, Assam, the Deccan and Southern India.

4th.—The humidity conditions of the year were steadily below the normal in the Konkan and Malabar.

These features were very persistent throughout the year. Thus in Bengal the relative humidity values were below the normal in every month of the year and in the Konkan for ten months out of the twelve. The larger variations for the year hence represent abnormal conditions which were very persistent throughout the whole year.

The following gives the mean annual variations of these two elements of observation for each year from 1875 to 1895 :—

	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	
Annual variation of pressure of vapour.	"	"	"	"	"	"	"	"	"	"	
	−·004	−·017	+·011	+·020	−·014	−04	+·001	−·008	−·013	−·012	
	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
	"	"	"	"	"	"	"	"	"	"	"
	+01	+·008	−·012	−·005	+·003	−·003	−·007	−·002	+·007	+·013	+·003
Annual variation of relative humidity.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	
	+ 1	− 1	+ 1	0	− 1	0	0	0	− 1	0	
	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
	0	+ 1	− 1	− 1	− 1	− 1	0	− 1	+ 3	+ 2	0

Cloud.

Variation data of this element of meteorological observation for the year 1895 are given in Tables X and XI. Table X gives mean variation data for the eighteen meteorological areas adopted in the geographical summaries of meteorological data in the Annual Reports previous to 1891, and Table XI gives similar data for the ten meteorological provinces of India.

TABLE X.—*Geographical summary of the cloud data of Table II in the Monthly Weather Reviews of 1895.*

Meteorological Province.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October	November.	December.	Year.
North-West Himalaya	6—7	+0·7	—2·0	+0·3	—0·1	—1·7	+1·2	—1·3	+0·3	—0·6	—0·1	+1·3	—0·7	—0·2
Sikkim Himalaya and Nepal.	2	+0·8	+1·2	+0·6	+1·0	+1·3	+0·8	+1·0	+1·2	+0·5	+1·1	+2·3	—0·9	+0·9
Punjab Plains . .	4	+0·8	—1·2	+0·8	—0·3	—1·3	+1·0	—1·1	+0·7	—0·4	+0·2	+1·7	—0·3	+0·1
Gangetic Plain .	8—9	+1·1	—1·1	+0·3	+1·0	—0·6	+1·3	—0·5	+0·5	—1·0	—0·2	+0·2	—0·6	0
Western Rajputana .	3	+0·1	—1·8	—0·3	—0·7	+0·1	+0·2	—1·8	—0·4	—1·1	0	+0·8	—0·6	—0·5
Eastern Rajputana and Central India.	5	+1·3	—0·6	+0·8	+0·6	—0·9	+0·9	—0·9	+0·3	—0·4	+0·3	+0·4	—0·2	+0·1
Nerbudda Valley .	3	+0·9	+0·8	+1·2	+0·3	—1·0	+0·3	—0·5	+0·1	+0·1	+0·2	—0·6	—0·9	+0·1
Chota Nagpur .	1	—0·3	+1·1	+1·0	+3·1	+2·6	+1·1	+0·5	+1·1	—0·2	—0·2	0	+0·4	+0·9
Lower Bengal . .	5	0	+0·5	—0·1	+1·4	+0·4	—0·2	+0·3	+0·4	—0·1	—0·5	—0·3	+0·9	+0·2
Assam and Cachar .	2—4	—0·1	—0·2	+0·4	+1·8	+1·8	—0·9	+0·6	0	—0·5	—0·2	+0·5	+0·6	+0·3
Orissa . . .	2	+0·3	+0·9	—0·9	+1·3	+0·3	+0·3	—0·5	+0·5	—0·3	+0·3	—0·8	+0·8	+0·2
Central Provinces (South) and Berar.	5	+0·7	+1·9	+0·5	+0·4	—0·2	+0·7	—0·4	—0·1	—0·1	+0·1	—0·8	—0·6	+0·2
Konkan . . .	2—3	—0·3	+0·6	0	+0·3	+0·4	—0·4	+0·2	0	+0·2	+1·2	—0·3	+0·2	+0·2
Malabar Coast .	1	—1·0	—2·0	—2·0	+1·1	—2·2	—1·1	+1·6	+0·8	+0·5	+1·8	—1·5	+0·2	—0·3
Deccan, Hyderabad and Mysore.	5—6	+0·1	+0·1	—0·8	—0·8	—0·4	+0·6	+0·7	+0·5	+0·6	+1·0	—1·0	—0·2	0
East Coast and Carnatic.	4	+0·1	—0·3	—1·0	+0·4	—1·0	—0·3	+0·7	+0·8	+0·3	+0·6	—0·9	+0·6	0
Arakan and Pegu .	4	—0·4	—0·6	+0·4	+2·3	+1·6	+0·5	+0·7	+1·0	+0·6	—0·8	—1·0	+2·0	+0·5
Bay Islands . .	1	+0·2	—0·8	+0·1	+2·5	+1·7	+1·3	+1·2	+2·2	+1·4	+0·6	+0·4	+2·2	+1·1
Extra Tropical India	39—43	+0·6	—0·7	+0·4	+0·5	—0·5	+0·7	—0·6	+0·4	—0·5	0	+0·6	—0·3	+0·1
Tropical India .	24—26	+0·1	+0·3	—0·3	+0·6	0	+0·3	+0·4	+0·5	+0·3	+0·5	—0·8	+0·5	+0·2
Whole India . .	63—69	+0·4	—0·3	+0·1	+0·6	—0·3	+0·5	—0·2	+0·4	—0·2	+0·2	0	0	+0·1

TABLE XI.—*Variations of the mean cloud amount from the normal in ten meteorological provinces of India in 1895.*

Meteorological Province.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma Coast and Bay Islands	—0·3	—0·7	+0·4	+2·4	+1·8	+0·9	+0·6	+1·3	+0·8	—0·3	—0·8	+1·9	+0·6
Assam	—0·3	—1·4	+0·4	+0·1	+0·1	—1·4	+0·9	0	—0·5	—0·9	—0·6	—0·5	—0·3
Bengal and Orissa . .	0	+0·5	—0·3	+1·4	+0·7	—0·1	+0·3	+0·5	—0·1	—0·4	—0·5	+1·0	+0·3
Gangetic Plain and Chota Nagpur.	+0·5	—0·3	+0·4	+1·5	+0·2	+0·7	+0·3	+0·8	—0·7	—0·3	—0·2	—0·4	+0·2
Upper Sub-Himalayas . .	+1·4	—1·7	+0·4	+0·4	—1·3	+1·8	—1·7	+0·4	—1·0	—0·2	+1·1	—0·4	—0·1
Indus Valley and North-West Rajputana.	+0·3	—1·5	+0·2	—0·5	—0·5	+0·8	—1·0	+0·2	—0·3	+0·5	+1·7	—0·3	0
East Rajputana, Central India and Gujarat.	+1·1	—1·2	+0·5	+0·5	—0·6	+0·6	—1·2	0	—1·0	0	+0·6	—0·6	—0·1
Deccan	+0·5	+1·0	+0·5	+0·1	—0·6	+0·7	—0·3	0	0	+0·4	—1·0	—0·6	+0·1
West Coast	—0·5	—0·1	—0·5	+0·5	—0·3	—0·6	+0·5	+0·2	+0·3	+1·3	—0·6	+0·7	+0·1
South India . . .	+0·1	—0·2	—0·8	+0·2	—0·8	+0·1	+1·0	+0·9	+0·6	+0·9	—0·6	+0·7	+0·2

The following gives a brief statement of the chief features of the mean distribution of cloud in each period. In the tables the average or comparative data are given for the larger political divisions in order to present the facts from a slightly different point of view from that in Tables X and XI.

I. The Cold Weather Period.—January was more disturbed than usual in North-Western and Central India, and hence the cloud amount was above the normal over the whole area affected, but was, on the other hand, less than usual over North-Eastern India, Burma and the Peninsula. February was unusually free from disturbances, and the variations of the amount of cloud in Northern and Central India from the normal were hence generally opposite in character to those of January.

The following gives the more important abnormal features of the cloud distribution of this period :—

(1) There was less cloud than usual during the whole period at Port Blair and in Burma and Assam :—

Station or Province.	Mean cloud amount, cold weather period, 1895.		
	Actual.	Normal.	Variation from normal.
Port Blair	2·8	3·1	—0·3
Burma	1·2	1·8	—0·6
Assam	2·6	3·5	—0·9

(2) Cloud was also in defect during this period in the Konkan, Malabar and Southern India. This is most clearly shown by the data of six representative stations in those areas given below :—

Station.	Mean cloud amount, cold weather period, 1895.		
	Actual.	Normal.	Variation from normal.
Bombay	1·1	1·4	—0·3
Karwar	0·5	0·8	—0·3
Cochin	0·6	2·1	—1·5
Trichinopoly	2·1	3·5	—1·4
Bangalore	1·1	2·5	—1·4
Wellington	2·7	2·9	—0·2

(3) Cloud was in moderate defect in January and in moderate excess in February in Bengal and Chota Nagpur, and was in excess throughout the period in Orissa, and in slight defect in Bihar. The following gives data :—

Division.	Variation of mean cloud amount from normal in—		
	January 1895.	February 1895.	Mean of period, cold weather 1895.
Bengal	—0·1	+0·3	+0·1
Orissa	+0·3	+0·9	+0·6
Chota Nagpur	—0·3	+1·1	+0·4
Bihar	—0·1	—0·7	—0·4

(4) Cloud was in moderate to large excess in the North-Western Provinces, the Punjab, Rajputana, Central India, Berar and the Central Provinces in January, and was in moderate to large defect in the same areas (except Berar and the Central Provinces) during the month of February. Hence, as shown below, the variations of the mean cloud amount of the cold weather period from the normal in these districts were small :—

Area.	Mean cloud amount, cold weather period 1895.		
	Actual.	Normal.	Variation from normal.
Bihar	1·7	2·1	—0·4
North-Western Provinces	2·9	2·8	+0·1
Punjab	3·5	3·7	—0·2
Rajputana	2·2	2·5	—0·3
Central India	2·9	2·6	+0·3
Berar	2·6	1·7	+0·9
Central Provinces	2·7	1·7	+1·0

(5) Cloud was in moderate excess at the hill stations in Upper India in January and in large defect in February. Data for six stations are given below :—

Station.	Variation of mean cloud amount from normal in—		
	January 1895.	February 1895.	Mean of cold weather period 1895.
Leh	+0·7	—2·7	—1·0
Murree	+0·4	—1·3	—0·5
Simla	+0·9	—2·1	—0·6
Ranikhet	+1·9	—2·5	—0·3
Quetta	+0·1	—2·0	—1·0
Mount Abu	+0·1	—1·8	—0·9

II. The Hot Weather Period.—April was somewhat more disturbed than usual in North-Western India. Numerous series of thunderstorms occurred in North-Eastern India in March and April. May was an unusually dry and hot month over the whole of Northern India and skies were very free from cloud except in those districts which were directly under the influence of the local sea breezes and winds ofthe month, *viz.*, Lower Burma, Assam, and East and North Bengal.

The following is a summary of the chief abnormal features of the distribution of cloud during the season :—

(1) The amount of cloud was steadily in excess at Port Blair and in Burma, Assam, Bengal and Chota Nagpur during the period, as is shown below :—

Area.	Mean cloud amount, hot weather period 1895.		
	Actaul.	Normal.	Variation from normal.
Port Blair	5·9	4·5	+1·4
Burma	5·1	3·5	+1·6
Assam	5·4	5·2	+0·2
Bengal	4·5	3·7	+0·8
Chota Nagpur	5·1	2·9	+2·2

(2) The cloud amount was in moderate excess in the North-Western Provinces, Punjab, Rajputana, Central India, Berar and the Central Provinces in March and April, but was more or less considerably in defect in May, and on the mean of the whole period, March to May, was approximately normal :—

Division.	Variation of mean cloud amount from normal in			
	March 1895.	April 1895.	May 1895.	Mean of hot weather period 1895.
North-Western Provinces and Oudh	+0·6	+1·1	—0·8	+0·3
Punjab	+0·8	—0·3	—1·3	—0·3
Rajputana	+0·5	+0·5	—0·4	+0·2
Central India	+0·6	+0·2	—1·4	—0·2
Berar	+0·1	+0·3	—0·7	—0·1
Central Provinces	+1·0	+0·4	—0·5	+0·3

(3) The variations at the hill stations in Northern India were similar to those at neighbouring stations in the Gangetic Plain, but were larger in amount, more

especially in May. The following gives data for six stations :—

Hill Station.	Variation of mean cloud amount from normal in—			
	March 1895.	April 1895.	May 1895.	Mean of hot weather period 1895.
Leh	—0·4	—1·2	—1·9	—1·2
Murree	+0·9	—0·9	—2·5	—0·8
Simla	+0·7	+0·7	—1·8	—0·1
Ranikhet	—0·3	+1·3	—1·5	—0·2
Quetta	+0·9	—0·8	+0·6	+0·2
Mount Abu	+0·1	—0·8	—0·8	—0·5

(4) There was on the whole less cloud than usual in Southern India, Malabar and the Konkan. The deficiency was very marked in May :—

Station.	Variation of mean cloud amount from normal in—			
	March 1895.	April 1895.	May 1895.	Mean of hot weather period 1895.
Bombay	—0·5	—1·5	—1·1	—1·0
Karwar	—0·3	+0·7	—0·2	+0·1
Cochin	—2·0	+1·1	—2·2	—1·0
Trichinopoly	—1·7	—1·2	—2·6	—1·8
Bangalore	—1·8	—0·1	—0·5	—0·8
Bellary	+1·0	+2·0	+0·4	+1·1
Wellington	—1·5	+2·0	+0·3	+0·3

III. The South-West Monsoon Period.—The variations of the amount of cloud from the normal during this period were determined by the chief features of the distribution of monsoon rainfall. As is usual when the monsoon currents are below their normal strength in July and September, the cloud amount in the Peninsula or Tropical India was steadily above the normal, thus showing the greater determination of the current to the Peninsula than in normal years. The cloud amount in Northern and Central India was in slight excess in the months of June and August, when the monsoon currents were strongest and had their full extension and was in slight to moderate defect in July and September, in which months the monsoon currents were weak and the rainfall over nearly the whole of Northern and Central India was considerably below the normal of the period.

The following table gives monthly variation data of the cloud amount for the larger political divisions of Northern and Central India :—

Political Division.	Variation of mean cloud amount from normal in—				
	June 1895.	July 1895.	August 1895.	September 1895.	Mean of period, June to September 1895.
Bengal	—0·3	+0·5	+0·5	0	+0·2
Bihar	—0·1	+0·7	+1·1	—1·0	+0·2
Chota Nagpur	+1·1	+0·5	+1·1	—0·2	+0·6
North-Western Provinces and Oudh.	+1·7	—0·9	+0·3	—1·0	0
Punjab	+1·0	—1·1	+0·7	—0·4	+0·1
Rajputana	+0·1	—1·5	—0·1	—1·2	—0·7
Central India	+0·6	—0·9	—0·2	—0·9	—0·4

In the following statement are given the mean actual and mean normal amounts of cloud in each of these divisions and the variation of the actual from the normal for the whole period :—

Political Division.	Mean cloud amount during the south-west monsoon period, 1895.			
	Actual.	Normal.	Variation from normal.	Percentage variation.
Bengal	7·9	7·7	+0·2	+ 3
Bihar	6·7	6·5	+0·2	+ 3
Chota Nagpur	8·9	8·3	+0·6	+ 7
North-Western Provinces and Oudh	5·7	5·7	0	0
Punjab	2·9	2·8	+0·1	+ 4
Rajputana	5·0	5·7	—0·7	—12
Central India	6·2	6·6	—0·4	— 6

Cloud was in excess in Burma during the whole period, as is shown below :—

Province.	Variation of mean cloud amount from normal in—				
	June 1895.	July 1895.	August 1895.	September 1895.	Mean of period, June to September 1895.
Burma	+0·7	+0·4	+1·0	+0·6	+0·7

The following table gives data showing the variation of

cloud in different parts of the Peninsula during the monsoon. Cloud was in slight to moderate excess over the whole area :—

Area.	Variation of mean cloud amount from normal in—				
	June 1895.	July 1895.	August 1895.	September 1895.	Mean of period, June to September 1895.
Berar	+1·1	+0·1	+0·1	+0·6	+0·5
Central Provinces	+0·7	−0·5	+0·2	−0·2	+0·1
West Coast	−0·6	+0·6	+0·2	+0·3	+0·1
Deccan	+0·6	+0·1	−0·1	+0·2	+0·2
Mysore and Coorg	+0·2	+1·4	+1·0	+0·7	+0·8
Madras Coast	+0·5	+0·4	+1·1	+0·5	+0·6

In the following statement are given the variations from the normal, month by month, of the mean cloud at seven representative hill stations in Northern and Central India :—

Hill Station.	Variation of mean cloud amount from normal in—				Mean of period, June to September 1895.
	June.	July.	August.	September.	
Leh	−0·2	0	0	+0·4	+0·1
Murree	+1·8	−1·1	+0·6	−1·3	0
Simla	+2·4	−0·6	+0·7	−0·1	+0·6
Ranikhet	+2·6	−1·5	0	−0·3	+0·2
Darjeeling	+0·4	+1·0	+1·0	+0·6	+0·8
Mount Abu	−0·2	−1·2	+0·1	−1·6	−0·7
Pachmarhi	+0·4	−0·8	+0·3	−0·3	−0·1

IV. The Retreating South-West Monsoon Period.—The variations of the cloud amount from the normal were during this period opposite in character in North-Western and Central India and in the Peninsula. Thus, in October and December there was more cloud than usual over the Peninsula and less in November, whereas in North-Western India cloud was in excess in November and generally below the normal in the remaining two months of the period.

The following gives comparative data for the larger political divisions of North-Western and Central India :—

Political Division.	Variation of mean cloud amount from normal in—			
	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
Bihar	−1·2	−0·8	−0·9	−1·0
North-Western Provinces and Oudh	+0·2	+0·6	−0·6	+0·1
Punjab	+0·2	+1·7	−0·3	+0·5
Rajputana	0	+0·7	−0·6	0
Central India	+0·1	−0·3	−0·5	−0·2
Berar	−0·4	−0·7	−0·9	−0·7
Central Provinces	+0·4	−0·9	−0·6	−0·4

The mean cloud amount of the period was hence on the whole in defect in Northern and Central India. Corresponding data are given below for the larger divisions of the Peninsula :—

Area.	Variation of mean cloud amount from normal in—			
	October 1895.	November 1895.	December 1895.	Mean of period, October to December 1895.
Deccan	+0·4	−1·0	−0·6	−0·4
West Coast	+1·3	−0·6	+0·7	+0·5
Madras Coast	+0·7	−1·1	+1·4	+0·3
Mysore and Coorg	+0·9	−1·1	−0·2	−0·1

In North-Eastern India and Burma, the cloud amount was below the normal in October and November and was in excess in December. The excess in that month was very large in Arakan and Lower Burma and at Port Blair The following gives comparative data :—

Political Division.	Variation of mean cloud amount from normal in—			
	October 1895.	November 1895.	December 1895.	Mean of period. October to December 1895.
Port Blair	+0·6	+0·4	+2·2	+1·1
Lower Burma	+0·2	−2·0	+2·0	+0·1
Arakan	−2·2	+0·3	+1·5	−0·1
Bengal	−0·6	−0·4	+1·1	0
Assam	−0·9	+0·5	−0·5	−0·3

The amount of cloud was 2·0 in excess in December in Lower Burma and 2·2 in excess at Port Blair.

The year.—The mean cloud amount of the year in

India was 0·1 above the normal. The excess was very slightly greater in Tropical than in Extra-tropical India.

Area.	Variation of mean cloud amount from normal in				
	I Period.	II Period.	III Period.	IV Period.	Whole year.
Tropical India	+0·2	+0·1	+0·4	+0·1	+0·2
Extra-tropical India	−0·1	+0·1	0	+0·1	+0·1
Whole India	+0·1	+0·1	+0·1	+0·1	+0·1

The following table gives the variation of the mean amount of cloud in the Indian area, year by year, from 1875 to 1895:—

Year.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	
Annual variation of cloud amount.	0	−0·2	+0·3	+0·1	−0·1	−0·1	−0·1	0	+0·1	−0·1	
	1885.	1886.	1887.	1888.	1889.	1890.	1891	1892.	1893.	1894.	1895.
	+0·2	+0·2	−0·1	−0·1	+0·1	+0·2	+0·1	+0·1	+0·5	+0·5	+0·1

Rainfall.

The rainfall data of India are now issued in a separate volume. The fourth volume, that of 1895, contains the rainfall data of 2,197 stations, which are classified under their respective administrative divisions according to the following scheme:—

Province.	Number of stations.
Burma	136
Assam	101
Bengal, Bihar, Chota Nagpur and Orissa	327
N.-W. Provinces and Oudh	276
Punjab	203
Bombay	279
Madras	354
Coorg	10
Central Provinces	65
Berar	44
Mysore	79
Baluchistan	52
Kashmir	12
Rajputana	127
Central India	54
Hyderabad (Deccan)	24
Travancore	39
Cochin	3
Pudukota	12

The volume contains the whole of the available information for the year 1895 of this important element of meteorological observation.

The information includes monthly statements of—

(*a*) the actual rainfall day by day of all the rainfall stations;

(*b*) the total rainfall of the month;

(*c*) the number of rainy days during the month;

(*d*) the average or normal rainfall of the month for all stations for which rainfall data of at least five years are available;—

(*e*) the average or normal number of rainy days of the month for all stations for which rainfall data of five years or upwards are available;

(*f*) the accumulated rainfall (up to the date of each statement) throughout each of the seasons into which the year is divided.

Symon's rain-gauges are now used at all rain-gauge stations, with the exception of those in Mysore. The hour of measuring rainfall is 8 A.M. throughout India, and the amounts registered give the rainfall of the previous 24 hours, and hence generally of the rainfall of the previous civil day.

The following tables give summaries of the rainfall data of the year. In the first two tables (Tables XII and XIII) the summaries are drawn up in the form that was used for many years in the Annual Reports issued by the Department and are based on the rainfall returns of 386 selected stations. In the two succeeding tables (Tables XIV and XV) the actual average rainfall data (derived from the returns of the 2,197 rain-gauge stations in India) are given for the 52 meteorological districts into which the Empire is divided for the comparison of crops and rainfall for the four periods into which the year may be divided. The four periods are as follows:—

1st.—From January 1st to February 28th, which

forms the period of the cold weather rains of Upper India.

2nd.—From March 1st to May 31st, which includes the hot season, when rain occurs mainly in the coast districts, and in Assam during thunderstorms.

3rd.—From June 1st to October 31st, which forms the period of the south-west monsoon rains proper.

4th.—From November 1st to December 31st, which includes the period of the so-called north-east monsoon rains of Southern India, more especially of the Coromandel coast districts.

TABLE XII—*Geographical Summary of Rainfall Anomalies in 1895.*

Meteorological Division.	Area, square miles.	Number of Stations.	Normal rainfall.	Actual rainfall, 1895.	Mean excess or defect.	Total excess, square miles × 1 inch.	Total defect, square miles × 1 inch.
			Inches.	Inches.	Inches.		
I.—Punjab Plains	120,000	29	21·52	19·30	−2·22	...	266,4000
II.—North-Western Provinces and Oudh	83,500	45	37·49	38·11	+0·62	51,770	...
III.—Rajputana	67,000	19	28·42	22·13	−6·29	...	421,430
IV.—Central India States	91,000	20	42·01	34·52	−7·49	...	681,590
V.—Bihar	30,000	15	45·01	41·48	−3·53	...	105,900
VI.—Western Bengal	38,000	10	49·39	42·62	−6·77	...	257,260
VII.—Lower Bengal	54,000	28	66·64	50·41	−16·23	...	876,420
VIII.—Assam and Cachar	61,000	16	96·39	90·03	−6·36	...	387,960
IX.—Orissa and Northern Circars	27,000	16	48·00	52·16	+4·16	112,320	...
X.—Central Provinces, South	61,000	18	51·38	48·15	−3·23	...	197,030
XI.—Berar and Khandesh	43,000	13	35·96	31 76	−4·20	...	180,600
XII.—Gujarat	54,500	13	33·03	25·53	−7·50	...	408,750
XIII.—Sind and Cutch	68,000	10	8·49	5·98	−2·51	...	170,680
XIV.—North Deccan	48,000	13	30·54	31·97	+1·43	68,640	...
XV.—Konkan and Ghâts	16,000	11	138·92	121·34	−17·58	...	281,280
XVI.—Malabar and Ghâts	18,000	8	113 89	108·50	−5·39	...	97,020
XVII.—Hyderabad	74,000	16	32·71	37·69	+4·98	368,520	...
XVIII.—Mysore and Bellary	58,000	18	29·52	31·50	+1·98	114,840	...
XIX.—Carnatic	72,000	37	36·06	42·61	+6·55	471,600	...
XX.—Arakan	11,000	7	148·04	121·99	−26·05	...	286,550
XXI.—Pegu	32,500	7	71·95	64·08	−7·87	...	255,775
XXII.—Tenasserim	10,500	4	172·38	156·96	−15·42	...	161,910
XXIII.—Upper Burma	?	13	38·73	41·55	+2·82	...	...

On the mean of the whole area represented in the above table there was a defect of 3·38 inches or, excluding the Burmese Peninsula, 2·90 inches.

TABLE XIII.—*Geographical Summary of the distribution of rainfall in 1895, according to season.*

Meteorological Division.	January and February.			March to May.			June to October.			November and December.		
	Normal average.	Actual average, 1895.	Difference.	Normal average.	Actual average, 1895.	Difference.	Normal average.	Actual average, 1895.	Difference.	Normal average.	Actual average, 1895.	Difference
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
North-West Himalayas	6·17	7·23	+1·06	7·61	5·91	—1·70	40·53	40·11	—0·42	1·75	0·62	—1·13
Punjab Plains	2·08	2·79	+0·71	2·54	2·35	—0·19	16·13	14·07	—2·06	0·77	0·08	—0·69
North-Western Provinces and Oudh	1·41	2·42	+1·01	1·42	1·17	—0·25	35·25	35·16	—0·09	0·38	0·18	—0·20
Rajputana	0·46	0·62	+0·16	0·74	0·68	—0·06	21·51	16·63	—4·88	0·22	0·06	—0·16
Central India States	0·91	1·49	+0·58	0·78	0·87	+0·09	41·88	33·99	—7·89	0·67	0·20	—0·47
Bihar	1·17	1·01	—0·16	2·54	2·34	—0·20	40·47	38·08	—2·39	0·31	0·16	—0·15
Western Bengal and Chota-Nagpur	1·28	0·85	—0·43	3·48	4·11	+0·63	46·49	41·74	—4·75	0·72	0·07	—0·65
Lower Bengal	1·41	0·24	—1·17	10·40	8·80	—1·60	53·63	40·87	—12·76	0·71	0·16	—0·55
Eastern Himalayas	1·56	0·83	—0·73	18·12	21·34	+3·22	111·11	101·58	—9·53	0·46	0·72	+0·26
Assam and Eastern Bengal	1·92	0·75	—1·17	26·16	21·27	—4·89	87·78	66·00	—21·78	1·28	1·30	+0·02
Orissa and Northern Circars	0·68	0·53	—0·15	4·36	4·30	—0·06	43·73	52·45	+8·72	2·86	0·39	—2·47
Central Provinces, South	0·82	0·59	—0·23	1·80	1·63	—0·17	48·34	47·20	—1·14	0·93	0·06	—0·87
Berar and Khandesh	0·47	0·97	+0·50	0·99	0·97	—0·02	35·29	29·73	—5·56	1·37	0·09	—1·28
Gujarat	0·20	0·03	—0·17	0·41	0·09	—0·32	31·21	25·31	—5·90	0·31	0	—0·31
Sind and Cutch	0·50	0·22	—0·28	0·50	0·29	—0·21	7·88	5·76	—2·12	0·22	0·08	—0·14
North Deccan	0·20	0·18	—0·02	3·13	2·48	—0·65	25·53	28·36	+2·83	1·69	0·95	—0·74
Konkan and Ghâts	0·28	0·16	—0·12	1·65	0·31	—1·34	140·16	116·18	—23·98	1·12	1·15	+0·03
Malabar and Ghâts	0·51	0·05	—0·46	11·09	8·32	—2·77	98·08	97·77	—0·31	4·22	2·37	—1·85
Hyderabad	0·16	0·43	+0·27	1·91	1·91	0	29·03	32·82	+3·79	1·74	0·36	—1·38
Ceded Districts and Mysore	0·25	0·08	—0·17	4·65	5·95	+1·30	21·51	23·18	+1·67	2·80	2·30	—0·50
Carnatic	0·98	0·04	—0·94	4·15	3·72	—0·43	20·89	28·02	+7·13	10·76	10·88	+0·12
Nilgiris	1·42	0·78	—0·64	9·28	7·98	—1·30	25·42	31·13	+5·71	12·52	8·96	—3·56
Arakan	1·01	0·02	—0·99	15·09	17·56	+2·47	128·90	100·11	—28·79	3·08	4·31	+1·23
Pegu	0·24	0·28	+0·04	7·96	10·00	+2·04	66·50	56·91	—9·59	3·11	1·57	—1·54
Tenasserim	0·93	1·71	+0·78	20·91	26·44	+5·53	148·10	128·45	—19·65	2·35	0·37	—1·98
Upper Burma	0·40	0·20	—0·20	5·49	9·83	+4·34	30·85	26·58	—4·27	1·29	3·68	+2·39
Bay Islands	2·19	0	—2·19	18·59	20·61	+2·02	81·25	90·64	+9·39	14·64	14·50	—0·14

TABLE XIV.—*Average rainfall data of the 52 meteorological divisions in India for the four seasons of the year 1895 and for the whole year.*

Province.	Division.	January and February.			March to May.			June to October.			November and December.			Whole year.		
		Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches	Inches.
Burma	Tenasserim	1·01	0·26	+0·75	32·98	24·65	+8·33	153·85	157·75	— 3·90	0·58	1·59	—1·01	188·42	184·25	+ 4·17
	Lower Burma	0·14	0·37	—0·23	14·10	12·71	+1·39	77·03	84·01	— 6·98	0·83	3·95	—3·12	92·10	101·04	— 8·94
	Central do.	0·16	0·12	+0·04	11·64	10·09	+1·55	42·56	73·11	—30·55	1·61	2·99	—1·38	55·97	86·31	—30·34
	Upper do.	0·22	?	?	11·58	?	?	29·21	?	?	3·41	?	?	44·42	?	?
	Arakan	0·19	0·20	—0·01	18·33	19·90	—1·57	121·99	155·41	—33·42	4·20	4·09	+0·11	144·71	179·60	—34·89
Bengal and Assam	Eastern Bengal	0·08	1·58	—1·50	18·19	16·37	+1·82	56·98	70·83	—13·85	1·75	1·53	+0·22	77·00	90·31	—13·31
	Assam (Surma)	0·31	1·97	—1·66	40·17	37·48	+2·69	82·11	85·31	— 3·20	3·03	1·46	+1·57	125·62	126·22	— 0·60
	Do. (Brahmaputra)	1·41	2·37	—0·96	18·73	23·77	—5·04	64·55	59·87	+ 4·68	0·44	0·96	—0·52	85·13	86·97	— 1·84
	Deltaic Bengal	0·16	1·63	—1·47	8·44	10·59	—2·15	35·05	48·90	—13·85	0·09	0·61	—0·52	43·74	61·73	—17·99
	Central do.	0·40	1·25	—0·85	5·78	7·37	—1·59	34·89	48·26	—13·37	0·04	0·44	—0·40	41·11	57·32	—16·21
	North do.	0·22	1·15	—0·93	16·11	15·06	+1·05	79·60	85·08	— 5·48	0·30	0·32	—0·02	96·23	101·61	— 5·38
	Orissa	1·01	1·28	—0·27	4·24	6·17	—1·93	58·85	49·17	+ 9·68	0·50	1·89	—1·39	64·60	58·51	+ 6·09
	Chota Nagpur	0·91	1·34	—0·43	4·38	3·60	+0·78	43·35	48·37	— 5·02	0·01	0·79	—0·78	48·65	54·10	— 5·45
	Bihar (South)	1·07	1·05	+0·02	1·69	2·47	—0·78	35·35	39·09	— 3·74	0·10	0·44	—0·34	38·21	43·05	— 4·84
	Do. (North)	0·71	1·08	—0·37	3·62	4·34	—0·72	45·69	45·57	+ 0·12	0·07	0·23	—0·16	50·09	51·22	— 1·13
North-Western Provinces and Oudh.	North-Western Provinces (East).	1·19	0·99	+0·20	1·02	0·91	+0·11	32·59	35·98	— 3·39	0·30	0·37	—0·07	35·10	38·25	— 3·15
	Oudh (South)	1·95	0·95	+1·00	0·72	0·99	—0·27	32·81	33·73	— 0·92	0·13	0·43	—0·30	35·61	36·10	— 0·49
	Do. (North)	1·96	1·09	+0·87	1·94	1·55	+0·39	37·01	31·12	+ 5·89	0·03	0·42	—0·39	40·94	34·18	+ 6·76
	North-Western Provinces (Central).	2·50	0·80	+1·70	0·50	0·79	—0·29	28·70	32·00	— 3·30	0·24	0·40	—0·16	31·94	33·99	— 2·05
	North-Western Provinces (West).	2·40	0·85	+1·55	0·61	0·90	—0·29	24·03	26·78	— 2·75	0·31	0·38	—0·07	27·35	28·91	— 1·56
	North-Western Provinces (Submontane).	3·69	2·55	+1·14	2·13	2·81	—0·68	43·22	41·72	+ 1·50	0·14	0·53	—0·39	49·18	47·61	+ 1·57
Punjab	Punjab (South)	1·67	1·01	+0·66	0·69	1·22	—0·53	9·21	11·24	— 2·03	0	0·31	—0·31	11·57	13·78	— 2·21
	Do. (Central)	2·77	1·24	+1·53	0·93	1·47	—0·54	12·61	17·95	— 5·34	0·20	0·34	—0·14	16·51	21·00	— 4·49
	Do. (Submontane)	4·19	2·87	+1·32	1·62	2·58	—0·96	17·93	24·83	— 6·90	0·09	0·74	—0·65	23·83	31·02	— 7·19
	Do. (Hill Districts)	7·36	6·40	+0·96	4·00	8·43	—4·43	44·99	45·43	— 0·44	0·89	1·60	—0·71	57·24	61·86	— 4·62
	Do. (North-West)	3·30	3·09	+0·21	5·42	3·92	+1·50	13·65	14·98	— 1·33	0·06	1·04	—0·98	22·43	23·03	— 0·60
	Do. (West)	0·82	1·05	—0·23	2·77	1·73	+1·04	7·11	6·07	+ 1·04	0·05	0·29	—0·24	10·75	9·14	+ 1·61

TABLE XIV.—*Average rainfall data of the 52 meteorological divisions in India for the four seasons of the year 1895 and for the whole year*—concld.

Province.	Division.	January and February.			March to May.			June to October.			November and December.			Whole year.		
		Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Bombay and Malabar Coast Districts (Madras).	Malabar	0·02	0·35	—0·33	8·22	9·88	—1·66	113·73	112·09	+ 1·64	1·93	4·81	—2·88	123 90	127·13	— 3·23
	Madras (South Central)	0·06	0·25	—0·19	6·65	6·06	+0·59	23·52	18·12	+ 5·40	4·65	5·16	—0·51	34·88	29·59	+ 5·29
	Coorg	0·10	?	?	7·54	?	?	79·04	?	?	1·55	?	?	88·23	?	?
	Mysore	0·04	0·17	—0·13	6·33	5·14	+1·19	26·79	25·60	+ 1·19	2·11	3·12	—1·01	35·27	34·03	+ 1·24
	Konkan	0·06	0·14	—0·08	0·67	2·08	—1·41	101·59	111·78	—10·19	1·33	1·24	+0·09	103·65	115·24	—11·59
	Bombay Deccan	0·19	0·10	+0·09	2·20	2·82	—0·62	32·17	31·81	+ 0·36	1·12	1·87	—0·75	35·68	36·60	— 0·92
	Hyderabad (North)	0·38	0·16	+0·22	1·96	1·66	+0·30	35·12	31·85	+ 3·27	0·46	1·72	—1·26	37·92	35·39	+ 2·53
	Khandesh	0·48	0·13	+0·35	0·24	1·22	—0·98	29·44	30·03	— 0·59	0·27	1·54	—1·27	30·43	32·92	— 2·49
Central Provinces and Berar.	Berar	1·00	?	?	0·90	?	?	25·27	?	?	0·13	?	?	27·30	?	?
	Central Provinces (West)	0·77	0·77	0	1·39	0·96	+0·43	38·42	42·05	— 3·63	0·06	0·88	—0·82	40·64	44·66	— 4·02
	Do. (Central)	1·51	0·77	+0·74	1·89	1·27	+0·62	42·06	48·91	— 6·85	0·16	0·68	—0·52	45·62	51·63	— 6·01
	Do. (East)	0·30	0·79	—0·49	1·93	1·91	+0·02	49·72	51·43	— 1·71	0·04	0·78	—0·74	51·99	54·91	— 2·92
Bombay (North).	Gujarat	0·02	0·08	—0·06	0·06	0·32	—0·26	33·49	44·47	—10·98	0	0·24	—0·24	33·57	45·11	—11·54
	Kathiawar	0·07	0·14	—0·07	0·06	0·37	—0·31	21·46	27·32	— 5·86	0	0·25	—0·25	21·59	28·08	— 6·49
	Sind	0·32	0·71	—0·39	0·41	0·60	—0·19	5·01	4·72	+ 0·29	0·12	0·18	—0·06	5·86	6·21	— 0·35
Rajputana and Central India.	Central India (East)	1·60	0·90	+0·70	0·65	0·74	—0·09	29·08	41·36	—12·28	0·39	0·74	—0·35	30·72	43·74	—13·02
	Rajputana (East), Central India (West).	1·04	0·51	+0·53	0·72	0·80	—0·08	18·45	26·82	— 8·37	0·15	0·28	—0·13	20·36	28·41	— 8·05
	Rajputana (West)	0·25	0·35	—0·10	0·46	0·64	—0·18	7·75	10·81	— 3·06	0	0·04	—0·04	8·46	11·84	— 3·38
Madras	East Coast (North)	0·54	0·42	+0·12	3 68	3·29	+0·39	45·42	32·85	+12·57	0·70	4·25	—3·55	50·34	40 81	+ 9·53
	Do. (do.)(a)	0·64	0·26	+0·38	7·37	4·88	+2·49	58·92	51·93	+ 6·99	0·98	3·14	—2·16	67·91	60·21	+ 7·70
	Hyderabad (South)	0·50	0·25	+0·25	1·97	2·11	—0·14	29·82	26·74	+ 3·08	0·26	1·47	—1·21	32·55	30·57	+ 1·98
	Madras (Central)	0·02	0·08	—0·06	2·92	2·48	+0·44	22·57	21·04	+ 1·53	1·84	2·72	—0·88	27·35	26·32	+ 1·03
	East Coast (Central)	0·01	0·67	—0·66	2·08	2·06	+0·02	23·14	20·52	+ 2·62	5·40	11·94	—6·54	30·63	35·19	— 4·56
	Do. (South)	0·01	0·75	—0·74	2·90	4·19	—1·29	30·40	23·63	+ 6·77	14·18	13·79	+0·39	47·49	42·36	+ 5·13
	Madras (South)	0·18	1·17	—0·99	5·59	5·09	+0·50	17·03	12·43	+ 4·60	10·40	10·14	+0·26	33·20	28·83	+ 4·37

TABLE XV.—*Average actual and normal number of rainy days in the 52 meteorological divisions in India for the four seasons of the year 1895 and for the whole year.*

Province.	Division.	January and February.			March to May.			June to October.			November and December.			Whole year.		
		Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.
Burma	Tenasserim	1·8	?	?	31·2	?	?	106·8	?	?	1·5	?	?	141·3	?	?
	Lower Burma	0·3	?	?	18·6	?	?	97·6	?	?	1·8	?	?	118·3	?	?
	Central do.	0·5	?	?	15·3	?	?	70·0	?	?	4·2	?	?	90·0	?	?
	Upper do.	0·6	?	?	14·9	?	?	39·5	?	?	5·6	?	?	60·6	?	?
	Arakan	0·3	?	?	16·0	?	?	100·1	?	?	5·3	?	?	121·7	?	?
Bengal and Assam	Eastern Bengal	0·3	2·9	−2·6	18·8	19·9	−1·1	66·2	74·3	−8·1	1·2	1·9	−0·7	86·5	99·0	−12·5
	Assam (Surma)	1·1	4·2	−3·1	34·6	37·4	−2·8	87·6	84·1	+3·5	4·0	2·0	+2·0	127·3	127·7	− 0·4
	Do. (Brahmaputra)	4·0	6·6	−2·6	27·9	34·7	−6·8	64·8	67·6	−2·8	1·1	2·4	−1·3	97·8	111·3	−13·5
	Deltaic Bengal	0·5	2·7	−2·2	10·9	14·3	−3·4	53·7	63·1	−9·4	0·2	1·4	−1·2	65·3	81·5	−16·2
	Central do.	1·3	2·3	−1·0	9·9	10·9	−1·0	50·9	60·9	−10·0	0·1	1·0	−0·9	62·2	75·1	−12·9
	North do.	0·8	2·6	−1·8	20·6	17·8	+2·8	65·4	70·3	−4·9	1·0	0·8	+0·2	87·8	91·5	− 3·7
	Orissa	1·8	2·2	−0·4	6·8	9·5	−2·7	57·4	59·4	−2·0	0·1	2·9	−2·8	66·1	74·0	− 7·9
	Chota Nagpur	2·6	2·7	−0·1	8·5	6·9	+1·6	54·9	63·2	−8·3	0·1	1·4	−1·3	66·1	74·2	− 8·1
	Bihar (South)	2·5	2·5	0	3·3	4·4	−1·1	43·8	47·4	−3·6	0·3	0·8	−0·5	49·9	55·1	− 5·2
	Do. (North)	2·3	2·5	−0·2	6·0	6·2	−0·2	48·4	49·3	−0·9	0·3	0·7	−0·4	57·0	58·7	− 1·7
North-Western Provinces and Oudh	North-Western Provinces (East).	2·4	2·2	+0·2	2·1	2·1	0	38·9	41·5	−2·6	0·6	0·6	0	44·0	46·4	− 2·4
	Oudh (South)	4·9	2·0	+2·9	1·8	2·2	−0·4	34·2	37·8	−3·6	0·5	0·7	−0·2	41·4	42·7	− 1·3
	Do. (North)	5·2	2·1	+3·1	3·7	3·1	+0·6	41·1	33·4	+7·7	0·1	0·7	−0·6	50·1	39·3	+10·8
	North-Western Provinces (Central).	5·7	1·9	+3·8	1·3	2·0	−0·7	32·9	35·3	−2·4	0·9	0·5	+0·4	40·8	39·7	+ 1·1
	North-Western Provinces (West).	5·7	2·1	+3·6	2·3	2·5	−0·2	28·3	30·9	−2·6	1·0	0·6	+0·4	37·3	36·1	+ 1·2
	North-Western Provinces (Submontane).	7·5	3·9	+3·6	4·8	4·7	+0·1	41·6	40·0	+1·6	0·4	0·9	−0·5	54·3	49·5	+ 4·8
Punjab	Punjab (South)	4·2	2·3	+1·9	2·3	2·6	−0·3	14·2	13·8	+0·4	0	0·5	−0·5	20·7	19·2	+ 1·5
	Do. (Central)	6·4	2·7	+3·7	2·8	3·3	−0·5	17·9	19·4	−1·5	0·5	0·6	−0·1	27·6	26·0	+ 1·6
	Do. (Submontane)	8·7	4·8	+3·9	4·2	4·8	−0·6	24·5	24·2	+0·3	0·2	1·1	−0·9	37·6	34·9	+ 2·7
	Do. (Hill Districts)	11·4	8·6	+2·8	9·4	13·2	−3·8	46·8	46·0	+0·8	2·3	2·2	+0·1	69·9	70·0	− 0·1
	Do. (North-West)	6·3	5·5	+0·8	10·7	6·8	+3·9	17·1	17·3	−0·2	0·2	1·3	−1·1	34·3	30·9	− 3·4
	Do. (West)	2·4	2·4	0	5·3	3·5	+1·8	10·7	15·5	−4·8	0·2	0·5	−0·3	18·6	21·9	− 3·3

TABLE XV.—*Average actual and normal number of rainy days in the 52 meteorological divisions in India for the four seasons of the year 1895 and for the whole year*—concld.

Province.	Division.	January and February.			March to May.			June to October.			November and December.			Whole year.		
		Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.
Bombay and Malabar Coast Districts (Madras)	Malabar	0·1	0·5	−0·4	11·5	12·4	−0·9	99·5	99·8	−0·3	2·2	7·0	−4·8	113·3	119·7	− 6·4
	Madras (South Central)	0·1	0·5	−0·4	9·8	9·0	+0·8	34·0	27·8	+6·2	7·2	8·5	−1·3	51·1	45·8	+ 5·3
	Coorg	0·4	?	?	15·4	?	?	94·1	?	?	1·8	?	?	111·7	?	?
	Mysore	0	0·3	−0·3	9·8	8·7	+1·1	42·1	39·3	+2·8	3·1	4·8	−1·7	55·0	53·1	+ 1·9
	Konkan	0·2	0·2	0	1·3	3·2	−1·9	93·5	94·3	−0·8	1·7	2·0	−0·3	96·7	99·7	− 3·0
	Bombay Deccan	0·6	0·2	+0·4	4·2	5·7	−1·5	46·5	46·6	−0·1	1·8	2·9	−1·1	53·1	55·4	− 2·3
	Hyderabad (North)	1·2	?	?	5·1	?	?	46·6	?	?	0·8	?	?	53·7	?	?
	Khandesh	1·2	0·2	+1·0	0·6	2·0	−1·4	42·0	42·1	−0·1	0·4	2·2	−1·8	44·2	46·5	− 2·3
Central Provinces and Berar	Berar	2·7	?	?	2·9	?	?	40·9	?	?	0·3	?	?	46·8	?	?
	Central Provinces (West)	2·2	1·4	+0·8	3·7	2·1	+1·6	44·3	49·1	−4·8	0·3	1·1	−0·8	50·5	53·7	− 3·2
	Do. (Central)	3·1	1·7	+1·4	4·4	2·8	+1·6	50·2	52·4	−2·2	0·3	1·0	−0·7	58·0	57·9	+ 0·1
	Do. (East)	1·0	1·4	−0·4	4·9	3·7	+1·2	51·7	49·0	+2·7	0·1	1·1	−1·0	57·7	55·2	+ 2·5
Bombay (North)	Gujarat	0·1	0·2	−0·1	0·2	0·5	−0·3	44·2	48·1	−3·9	0	0·5	−0·5	44·5	49·3	− 4·8
	Kathiawar	0·2	0·2	0	0·2	0·6	−0·4	30·3	27·7	+2·6	0	0·2	−0·2	30·7	28·7	+ 2·0
	Sind	1·4	?	?	0·5	?	?	5·1	?	?	0·5	?	?	7·5	?	?
Rajputana and Central India	Central India (East)	4·3	?	?	1·9	?	?	39·2	?	?	0·8	?	?	46·2	?	?
	Rajputana (East), Central India (West)	2·8	?	?	2·1	?	?	23·8	?	?	0·4	?	?	29·1	?	
	Rajputana (West)	0·8	?	?	1·4	?	?	10·9	?	?	0	?	?	13·1	?	?
Madras	East Coast (North)	1·1	0·7	+0·4	5·8	5·2	+0·6	54·4	43·4	+11·0	0·9	4·3	−3·4	62·2	53·6	+ 8·6
	Do. (do.) (a)	1·5	0·7	+0·8	13·5	9·7	+3·8	80·5	67·6	+12·9	1·5	5·3	−3·8	97·0	83·3	+13·7
	Hyderabad (South)	1·1	?	?	4·4	?	?	43·6	?	?	0·5	?	?	49·6	?	?
	Madras (Central)	0·1	0·2	−0·1	5·8	4·2	+1·6	34·9	30·6	+4·3	3·0	4·2	−1·2	43·8	39·2	+ 4·6
	East Coast (Central)	0	0·8	−0·8	3·1	2·5	+0·6	32·2	27·1	+5·1	8·2	10·5	−2·3	43·5	40·9	+ 2·6
	Do. (South)	0·1	1·0	−0·9	4·7	4·8	−0·1	37·9	31·5	+6·4	12·6	14·0	−1·4	55·3	51·3	+ 4·0
	Madras (South)	0·6	1·8	−1·2	8·7	7·5	+1·2	24·5	19·2	+5·3	10·9	13·1	−2·2	44·7	41·6	+ 3·1

I.—The cold weather period.—The rainfall of this period was very irregularly distributed in Northern India. It was in general excess, slight to moderate in amount, in North-Western India, but was very scanty and in large defect, relatively to the normal, in North-Eastern India. A considerable number of cold weather storms affected the weather in Northern India during the first six weeks of this period. Four advanced eastwards in January and one in the first week of February. They were all unusually diffused disturbances which either did not pass into North-Eastern India, or filled up as they advanced eastwards and were very feeble when they passed into that area. The precipitation due to these storms was hence almost restricted to North-Western India. The most noteworthy feature of these storms in the Himalayan area was that the accompanying snowfall was confined to considerably greater elevations than usual, and was hence in excess only in the interior ranges.

The following data show that the precipitation was large in amount at the hill stations in North-Western India :—

Station.	Rainfall.					
	Average actual, January 1895.	Average actual, February 1895.	Average actual of period January and February 1895.	Average normal, January and February.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	Inches.	Inches.	
Murree . .	4·26	3·16	7·42	7·25	+0·17	+ 2
Simla . .	5·17	1·93	7·10	5·03	+2·07	+41
Dalhousie .	8·37	0	8·37	5·80	+2·57	+44
Dharmsala .	7·70	5·66	13·36	8·95	+4·41	+49
Mussoorie .	4·67	3·76	8·43	5·17	+3·26	+63
Ranikhet .	4·57	1·20	5·77	4·89	+0·88	+18
Kailang . .	3·68	1·95	5·63	7·94	−2·31	−29

Accurate snowfall measurements are now made at several stations in the Punjab Himalayas. The following gives the amounts registered at six of these stations where the measurement is believed to be accurately made :—

District or State.	Station.	Height in feet above sea-level.	Total snowfall in the month of		Total.	Approximate normal snowfall of period.
			January 1895.	February 1895.		
			′ ″	′ ″	′ ″	′ ″
Punjab .	Murree . .	6,344	7 1	3 3	10 4	13 8
Chamba .	Tisa . .	5,000	0 5	1 3	1 8	...
	Thanela . .	7,000	2 4	4 2	6 6	...
	Kalatop .	8,000	5 10	5 6	11 4	...
Garhwal	Malla Danpur .	...	4 0	5 0	9 0	...
	Malla Johar	...	26 0	6 0	32 0	...

The accumulation of snow on the lower ranges at the end of the winter was not nearly so large as in 1893.

The rainfall of the period was in moderate to large excess in the Punjab, the North-Western Provinces, Rajputana and Central India, and in defect in Baluchistan and Sind.

The following gives comparative data for those provinces derived from the whole of the available data employed for the preparation of Table XIV :—

Province.	Rainfall of period, January and February.		
	Average actual, 1895.	Average normal	Variation from normal.
	Inches.	Inches.	Inches.
Baluchistan	0·96	3·74	−2·78
Punjab	3·35	2·61	+0·74
N.-W. Provinces . . .	2·28	1·21	+1·07
Sind	0·32	0·71	−0·39
Rajputana	0·65	0·43	+0·22
Central India . . .	1·60	0·90	+0·70

The rainfall of the period was scanty and below the normal in Assam, Bengal, Bihar, Chota Nagpur and Orissa, as is shown by the following data :—

Province.	Rainfall of period, January and February.		
	Average actual, 1895.	Average normal.	Variation from normal.
	Inches.	Inches.	Inches.
Bengal	0·22	1·40	−1·18
Bihar	0·89	1·07	−0·18
Chota Nagpur . . .	0·91	1·34	−0·43
Orissa	1·01	1·28	−0·27
Assam	0·86	2·17	−1·31

The cold weather rains of Northern India ceased in February, much earlier than usual, and hot weather conditions were initiated in the Deccan and North-Eastern India at least a fortnight before the normal date.

The rainfall of the period in Berar, the Central Provinces and the Deccan was generally in slight excess due to the occurrence of numerous series of thundershowers in February, and was more or less below the normal in South

Madras, Mysore and the Coromandel Coast districts. The following gives data :—

Division.	Rainfall.					
	Average actual, January 1895.	Average actual, February 1895.	Average actual of period, January and February 1895.	Average normal, January and February.	Variation from normal of period.	Percentage variation.
	Inch.	Inch.	Inch.	Inches.	Inch.	
Mysore . .	0	0·04	0·04	0·17	−0·13	− 76
Madras (South Central).	0	0·06	0·06	0·25	−0·19	− 76
East Coast North.)	0·05	0·49	0·54	0·42	+0·12	+ 29
East Coast (North) (*a*).	0	0·64	0·64	0·26	+0·38	+146
Madras(Central)	0	0·02	0·02	0·08	−0·06	− 75
East Coast (Central).	0·01	0	0·01	0·67	−0·66	− 99
East Coast (South).	0·01	0	0·01	0·75	−0·74	− 99
Madras South .	0·18	0	0·18	1·17	−0·99	− 85
Hyderabad .	0·02	0·42	0·44	0·21	+0·23	+110
Bombay Deccan	0·01	0·18	0·19	0·10	+0·09	+ 90
Central Provinces.	0·11	0·75	0·86	0·78	+0·08	+ 10
Berar . .	0·10	0·90	1·00	?	?	?
Burma . .	0·08	0·27	0·35	0·24	+0·11	+ 46

II.—Hot Weather Period.—The distribution of the rainfall of this period was very similar in general character to that of the corresponding period of the three previous years. Weather was slightly less disturbed than usual in Upper India in the month of March, and was very dry over the remainder of India. Numerous series of thunderstorms occurred in the Peninsula, East Bengal and Cachar in April, which gave somewhat heavier rain than usual. A cyclonic storm which formed in the Bay and advanced to the Arakan Coast gave moderate to heavy general rain to Arakan and Burma in the last week of the month. May was hotter and drier than usual over the whole of India with the exception of Burma, Assam and East Bengal.

Burma obtained heavy rain during the fourth week of April from a cyclonic storm which initiated feeble monsoon conditions in that area, and it hence received frequent moderate rain during the month of May before the burst of the monsoon proper. The rainfall of this period was hence in moderate excess in that area. Also, as almost invariably occurs when hot weather conditions are more pronounced than usual in Northern and Central India, Cachar and East Bengal received frequent thundershowers during the whole period, and hence the rainfall was more abundant than usual in these areas. The following gives data for these areas of considerable increase of rainfall:—

Division.	Rainfall of period, March to May,			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Tenasserim . . .	32·98	24·65	+8·33	+34
Burma (Lower) . .	14·10	12·71	+1·39	+11
Do. (Central) . .	11·64	10·09	+1·55	+15
Do. (Upper) . .	11·58	?	?	?
Assam (Surma) . .	40·17	37·48	+2·69	+ 7
Bengal (East) .	18·19	16·37	+1·82	+11

The weather was unusually dry in March and May in the Assam Valley, Orissa, South-West and Central Bengal, and Bihar, and the rainfall of the whole period was in moderate to considerable defect over the greater part of the area defined above. The following gives comparative data of the period for these areas :—

Division.	Rainfall of per iod, March to May.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Arakan	18·33	19·90	−1·57	− 8
Assam (Brahmaputra) .	18·73	23·77	−5·04	−21
Bengal (Deltaic) . .	8·44	10·59	−2·15	−20
Do. (Central) . .	5·78	7·37	−1·59	−22
Do. (North) . .	16·11	15·06	+1·05	+ 7
Chota Nagpur . .	4·38	3·60	+0·78	+22
Bihar (South) . .	1·69	2·47	−0·78	−32
Do. (North) . .	3·62	4·34	−0·72	−17
Orissa	4·24	6·17	−1·93	−31

The rainfall was also more or less below the small normal of the period in the North-Western Provinces, the Punjab, Sind, Rajputana, Central India, the Konkan, Malabar and the Bombay Deccan. The deficiency was small in the Punjab, the North-Western Provinces, Rajputana, Central India, and Malabar, and was large relatively

to the normal in the remaining districts. It averaged 1·41 inch or 68 per cent. in the Konkan. The following gives comparative data:—

Division.	Rainfall of period, March to May 1895.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
North-Western Provinces and Oudh.	1·15	1·33	−0·18	−14
Punjab	2·57	3·23	−0·66	−20
Sind	0·41	0·60	−0·19	−32
Rajputana	0·59	0·7	−0·13	−18
Central India	0·65	0·74	−0·09	−12
Berar	0·90	?	?	?
Konkan	0·67	2·08	−1·41	−68
Malabar	8·22	9·88	−1·66	−17
Bombay Deccan	2·20	2·82	−0·62	−22

The rainfall of the period was in moderate excess over the greater part of the South Deccan and Southern India and in the Central Provinces, chiefly due to heavier rainfall than usual in April. The following gives data in illustration:—

Division.	Rainfall or period, March to May 1895.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Central Provinces	1·74	1·38	+0·36	+26
Mysore	6·33	5·14	+1·19	+23
Madras (South Central)	6·65	6·06	+0·59	+10
East Coast (North) (*a*)	7·37	4·88	+2·49	+51
Madras (South)	5·59	5·09	+0·50	+10

III.—South-West Monsoon period.—The rainfall of this period was considerably less in amount than usual, and was very unfavourably distributed in some districts. The monsoon currents were of normal strength in June. They were feeble in July, and a more or less complete break obtained during the first three weeks of the month over the greater part of Northern and Central India. They were on the whole moderately strong in August and gave normal and on the whole favourable rain during that month. The monsoon currents withdrew from Upper India in the first week of September.

The burst of heavy continuous rain which initiates the south-west monsoon proper occurred somewhat later than usual in the second week of June and commenced on practically the same date over the whole of the west coast to the south of Bombay, *viz.*, on the 12th. The Arabian Sea monsoon current advanced rapidly into the interior and more or less general rain was received in Berar, the Central Provinces, Central India, Rajputana and the East Punjab from the 12th to the 14th.

The Bay current was established about the normal date. The advance over the Bay initiated a cyclonic storm in the north-west of the Bay which crossed the Orissa coast on the 19th and advanced by a curved path to Rajputana and the Punjab carrying the monsoon current with it. A second and more severe storm was generated in the fourth week of the month. The following gives the dates of the establishment of the monsoon (*i.e.*, of the commencement of the heavy rainfall which marked the burst of the monsoon) in different parts of India:—

Province.	Date.
Bengal	June 13th
Bihar	Do. 16th
Chota Nagpur	Do. 19th
N.-W. Provinces	Do. 14th
Punjab	Do. 14th to 25th
Malabar	Do. 12th
Konkan	Do. 12th
Deccan	Do. 12th
Central Provinces	Do. 14th
Central India	Do. 12th
Rajputana	Do. 12th

The following is a brief statement of the more important features of the rainfall of the period, firstly, from month to month, and secondly, for the whole period:—

June.—The Bombay current was considerably delayed. Its establishment was about a fortnight later than the normal on the Malabar coast and a week later on the Konkan coast. The Bengal current advanced across the Bengal coast about the normal date (in the third week of the month), but was very unsteady. Both currents extended rapidly into the interior, and general rain fell over nearly the whole of North-Western and Central India before the end of the third week.

The distribution of the rainfall of the month was determined chiefly by the delay in the establishment of the Bombay monsoon current and the unusually rapid advance of the monsoon currents into the interior.

The chief features of the rainfall of the month were as follows :—

(*1st*).—Moderate to large deficiency in Burma, Arakan, Assam, Bengal and Bihar, that is, in the districts which come earliest under the influence of the Bay monsoon current. The following gives data :—

Division.	Rainfall.			
	Average actual, June 1895.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Tenasserim	34·64	40·49	− 5·85	− 14
Burma, Central	11·43	15·50	− 4·07	− 26
Do. Upper	5·80	?	?	?
Arakan	28·20	52·70	−24·50	− 46
Assam	12·06	19·55	− 7·49	− 38
Bengal (East)	9·05	18·96	− 9·91	− 52
Do (Deltaic)	8·71	10·62	− 1·91	− 18
Do. (Central)	6·80	10·20	− 3·40	− 33
Do. (North)	10·91	24·43	−13·52	− 55
Bihar	5·63	7·18	− 1·55	− 22

(*2nd*).—Madras East Coast North, Orissa and Chota Nagpur received heavy local rain from the two cyclonic storms of the month, and the rainfall was in considerable excess in these areas. The following gives data :—

Division.	Rainfall.			
	Average actual, June 1895.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Madras East Coast (North)	7·90	4·90	+ 3·00	+ 61
Do. Do. (*a*)	15·83	10·41	+ 5·42	+ 52
Orissa	20·08	8·85	+ 11·23	+ 127
Chota Nagpur	9·95	8·25	+ 1·70	+ 21

(*3rd*).—The rainfall of the month was more or less in defect in the west coast districts and the Peninsula to the south of Lat. 18° N. (except Mysore where it was in moderate excess and the Bombay Deccan where it was normal) as is shown by the following data :—

Division.	Rainfall.			
	Average actual, June 1895.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Mysore	5·42	3·94	+ 1·48	+ 38
Bombay Deccan	5·81	5·75	+ 0·06	+ 1
Konkan	23·96	27·15	− 3·19	− 12
Madras (Central)	2·24	2·63	− 0·39	− 15
East Coast (Central)	1·58	1·65	− 0·07	− 4
Do. (South)	0·84	2·27	− 1·43	− 63
Madras (South)	0·81	1·06	− 0·25	− 24
Madras (South Central)	1·74	2·03	− 0·29	− 14
Hyderabad	3·97	5·11	− 1·14	− 22

(*4th*).—The rainfall of the month was more or less in excess over by far the greater part of the interior of North-Western and Central India and the Central Provinces, where the rains commenced earlier than usual, as is shown in the following statement :—

Division.	Rainfall.			
	Average actual, June 1895.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Central Provinces	13·82	7·97	+ 5·85	+ 73
Central India	8·40	5·88	+ 2·52	+ 43
North-Western Provinces	7·60	4·23	+ 3·37	+ 80
Punjab	4·57	2·20	+ 2·37	+ 108

(*5th*).—The rainfall of the month was normal or in slight to moderate defect in Khandesh, Gujarat, Sind and Rajputana or in the areas to the north of the area of considerable local excess of pressure in May. The following gives data in illustration :—

Division.	Rainfall.			
	Average actual, June 1895.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inch.	
Khandesh	5·59	5·69	− 0·10	− 2
Gujarat	6·19	6·26	−0.07	− 1
Rajputana (East), Central India (West)	2·68	3·07	−0.39	− 13
Rajputana (West)	1·01	1·57	−0·56	−36
Sind	0·21	0·21	0	0

July.—The Bombay current was weak during the first fortnight of the month, and an almost complete break in the rains obtained over North-Western and Central India from the 2nd to the 20th. The Bengal current from the 4th to the 11th was chiefly directed to Assam and North Bengal which received a very heavy downpour from the 5th to the 11th. It was excessively heavy in the Goalpara and Khasi and Jaintia Hill Districts. The following gives details of this downpour :—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.					Total of period.
		7th.	8th.	9th.	10th.	11th.	
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Goalpara	Bijni	4·40	9·76	19·15	7·73	9·00	50·04
	Dhubri	4·15	4·24	3·55	11·11	2·06	25·11
	Kachugaon	4·74	4·78	10·53	7·07	4·90	32·02
	Marnai	5·25	10·30	8·40	7·00	2·05	33·00
Khasi and Jaintia Hills	Cherrapoonji	4·70	8·50	20·95	15·60	6·08	55·83
	Jowai	9·84	10·99	13·30	8·54	3·89	46·56
	Mauphlang	12·00	16·30	13·00	8·50	1·30	51·10

The Bengal current fell off in strength on the 12th and was very weak until the 20th, and the break in the rains extended over the whole of Northern and Central India during this period.

The Bombay current began to strengthen on the 22nd and gave rain in increasing amounts during the remainder of the month. Two storms formed in the Bay and advanced into the Central Gangetic Plain between the 17th and the end of the month. These storms gave general moderate rain to North-Eastern India.

The following gives a summary of the chief features of the rainfall of the month :—

1st.—The rainfall of the month was in moderate defect in Burma, Arakan, Orissa and Deltaic Bengal, in slight defect in East and Central Bengal and Normal in Chota Nagpur. The following gives data :—

Division.	Rainfall.			
	Average actual, July 1895.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Tenasserim	40·25	47·07	− 6·82	−14
Burma (Lower)	19·36	23·01	− 3·65	−16
Do. (Central)	9·96	12·09	− 2·13	−18
Do. (Upper)	5·21	?	?	?
Arakan	33·99	48·02	−14·03	−29
Bengal (East)	15·02	17·24	− 2·22	−13
Do. (Deltaic)	7·41	12·05	− 4·64	−39
Do. (Central)	10·71	12·05	− 1·34	−11
Orissa	10·36	12·50	− 2·14	−17
Chota Nagpur	13·52	13·67	− 0·15	− 1

2nd.—The rainfall of the month was in large excess in North Bengal and Assam, and in slight to moderate excess in Bihar, as is shown by the following data :—

Division.	Rainfall.			
	Average actual, July 1895.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Assam (Brahmaputra)	25·92	15·64	+10·28	+66
Do. (Surma)	24·22	19·00	+ 5·22	+27
Bengal (North)	34·07	20·60	+13·47	+65
Bihar (North)	15·58	12·18	+ 3·40	+28
Do. (South)	13·68	11·87	+ 1·81	+15

The rainfall was very excessive (more than 70 per cent. above the normal) in the districts for which data are given below :—

District.	Rainfall.			
	Average actual, July 1895.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Kuch Bihar	52·16	20·09	+32·07	+160
Jalpaiguri	48·90	25·66	+23·24	+ 91
Purnea	28·77	15·47	+13·30	+ 86
Rangpur	25·31	13·90	+11·41	+ 82
Muzaffarpur	19·22	11·26	+ 7·96	+ 71
Goalpara	48·84	15·46	+33·38	+216
Kamrup	24·69	13·41	+11·28	+ 84
Darrang	26·11	11·63	+14·48	+125
Khasi and Jaintia Hills	88·83	30·37	+58·46	+102

3rd.—The rainfall of July was in marked defect in the North-Western Provinces, Central India, the Punjab, Rajputana, Gujarat, Kathiawar and Sind, the deficiency increasing in relative amount (*i. e.*, expressed as a percentage) westwards and was most marked in the north-west districts of the Punjab and Sind. The following gives comparative data for this area of deficient rainfall :—

Division.	Rainfall.			
	Average. actual, July 1895.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
North-Western Provinces and Oudh.	10·22	11·73	−1·51	−13
Central India . . .	8·05	14·89	−6·84	−46
Rajputana . . .	4·70	6·61	−1·91	−29
Punjab	4·16	7·44	−3·28	−44
Sind	0·44	1·86	−1·42	−76
Gujarat	13·42	19·54	−6·12	−31
Kathiawar . . .	8·87	12·39	−3·52	−28

4th.—The rainfall of the month was in general defect in Berar, the Central Provinces, the Bombay Deccan and Mysore. The deficiency was greatest in Berar (42 per cent.) and diminished in percentage amounts southwards :—

Division.	Rainfall.			
	Average actual, July 1895.	Average normal, July.	Variation. from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Central Provinces . .	11·53	15·97	−4·44	−28
Berar	6·58	11·39	−4·81	−42
Bombay Deccan . .	6·73	9·29	−2·56	−28
Mysore	5·23	6·39	−1·16	−18

5th.—The variations in the remaining districts were generally small and of little importance except in Malabar, where the rainfall of the month was 19 per cent. in excess.

August.—The Bombay current was strong during the first fortnight of the month, but was feeble and considerably below its normal intensity during the last half of the month. The Bengal current was strong throughout the whole month. It was more unsteady than usual, and the distribution of the rainfall due to it was largely determined by a series of three cyclonic disturbances. The first storm formed on the 5th and 6th, advanced across the Orissa coast, and drifted rapidly west-north-westwards to Sind. The second storm formed on the 10th and 11th and advanced north-westwards across the Orissa coast to Bihar, where it filled up on the 15th. The third storm formed on the 23rd and 24th, crossed the Orissa coast on the 25th and filled up in Chota Nagpur on the 28th. The second and third storms were diffused disturbances which gave moderate general rain to the whole area over which they passed.

The rainfall due to these storms was more diffused and less irregularly distributed than usual. The total rainfall of the month differed to no large extent from the normal The following gives the chief features :—

(*1st*).—The rainfall of the month was in slight to moderate excess in Tenasserim, Arakan, North Bihar and Orissa, as is shown by the following data :—

Division.	Rainfall.			
	Average. actual, August 1895.	Average normal, August.	Variation. from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Tenasserim . . .	42·07	37·23	+4·84	+13
Arakan	33·33	31·55	+1·78	+ 6
Orissa	13·68	11·41	+2·27	+20
North Bihar . . .	14·56	11·56	+3·00	+26

(*2nd*).—It was normal in Assam, North and East Bengal and South Bihar, and in slight to moderate defect in Deltaic and Central Bengal and Chota Nagpur. The following data illustrate these features :—

Division.	Rainfall.			
	Average actual, August 1895.	Average normal, August.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Assam	17·60	17·30	+0·30	+ 2
Bengal (East)	16·37	16·67	−0·30	− 2
Do. (North)	19·29	19·10	+0·19	+ 1
Do (Central)	8·56	12·14	−3·58	−29
Do. Deltaic	8·99	12·70	−3·71	−29
Bihar, South	10·86	11·19	−0·33	− 3
Chota Nagpur	11·06	14·99	−3·93	−26

(*3rd*).—It varied somewhat irregularly from the normal in the North-Western Provinces and the Punjab, being in slight defect in Oudh, the eastern and central districts of the North-Western Provinces and the Central Punjab, and in slight to moderate excess in the remaining divisions. The following gives data for these areas :—

Province.	Division.	Rainfall.		
		Average actual, August 1895.	Average normal, August.	Variation from normal.
		Inches.	Inches.	Inches.
North-Western Provinces and Oudh.	Oudh (North)	10·30	10·44	—0·14
	Do. (South)	9·21	10·47	—1·26
	N.-W. Provinces (East)	9·35	10·79	—1·44
	Do. do. (Central)	9·27	10·37	—1·10
	Do. do. (Submontane.)	15·95	12·82	+3·13
	Do. do. (West)	9·14	8·69	+0·45
Punjab	Punjab (South)	4·50	3·44	+1·06
	Do. (Central)	4·72	5·27	—0·55
	Do. (Submontane)	10·38	8·33	+2·05
	Do. (Hills)	19·40	17·56	+1·84
	Do. (North-West)	7·14	5·61	+1·53
	Do. (West)	3·59	2·10	+1·49

(*4th*).—The rainfall of the month was in moderate defect in Rajputana, Central India, Berar, Khandesh and the Bombay Deccan. The following gives data :—

Division.	Rainfall.		
	Average actual, August 1895.	Average, normal, August.	Variation from normal.
	Inches.	Inches.	Inches.
Rajputana	6·01	7·11	—1·10
Central India	9·29	12·42	—3·13
Berar	5·14	6·95	—1·81
Khandesh	4·47	5·99	—1·52
Bombay Deccan	5·25	6·27	—1·02

September.—The Bombay current was weak throughout the whole month. It withdrew from Upper India at the end of August and from Central India and the greater part of the North-Western Provinces in the third week of September. The Bay current was probably slightly weaker than usual, and was even more unsteady than usual in September. Three storms formed in the Bay during the month. The first advanced along a much more southerly track than usual across the Circars coast into the Deccan and gave a heavy cyclonic downpour to the northern coast districts of Madras, Hyderabad and the Sholapur, Bijapur, Poona, Ahmednagar and Khandesh districts of Bombay. The second storm formed on the 15th and 16th in the north-west of the Bay and advanced along a north-westerly track across Orissa and Chota Nagpur into the eastern districts of the North-Western Provinces, where it broke up on the 20th. The third storm formed on the 28th and 29th and was advancing northwards to the head of the Bay at the end of the month. The rainfall of the month was very irregularly distributed and was chiefly determined to Burma, North-Eastern India and the northern half of the Peninsula. Little or no rain fell in North-Western and Central India. The following gives a summary of the chief features of the distribution of the rainfall of the month :—

1st.—The rainfall was almost *nil* and very largely in defect in Sind, the Punjab, Kathiawar and West Rajputana, the deficiency exceeding 75 per cent. as is shown below :—

Division.	Rainfall.			
	Average actual, September 1895.	Average normal, September.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Sind	0·02	0·49	—0·47	—96
Punjab (West)	0·17	0·79	—0·62	—78
Do. (North-West)	0·39	2·27	—1·88	—83
Do. (Submontane)	0·14	3·93	—3·79	—96
Do. Central	0·41	3·54	—3·13	—88
Do. (South)	0·03	1·99	—1·96	—98
Rajputana (West)	0·16	1·35	—1·19	—88
Kathiawar	1·14	4·70	—3·56	—76

2nd.—The average total rainfall of the month was between 50 and 75 per cent. below the normal in the Central Provinces, Gujarat,

Central India and the western division of the North-Western Provinces.

Division.	Rainfall.			
	Average actual, September 1895.	Average normal, September.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Gujarat	3·13	8·03	−4·90	−61
Central India	2·98	6·56	−3·58	−55
North-Western Provinces (West)	1·99	4·80	−2·81	−59
Central Provinces (East)	3·06	7·62	−4·56	−60
Ditto (Central)	2·78	7·95	−5·17	−65
Ditto (West)	4·36	8·80	−4·44	−50

3rd.—The rainfall of the month was in moderate to considerable defect in Bengal, Bihar, Chota Nagpur, the Konkan and Berar, as is shown by the following statement :—

Division.	Rainfall.			
	Average actual, September 1895.	Average normal, September.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Bengal (East)	10·79	12·48	−1·69	−14
Do. (North)	13·52	16·07	−2·55	−16
Do. (Deltaic)	5·43	8·92	−3·49	−39
Do. (Central)	6·99	9·97	−2·98	−30
Orissa	9·38	10·25	−0·87	−8
Chota Nagpur	6·00	8·59	−2·59	−30
Bihar (North)	8·85	9·64	−0·79	−8
Do. (South)	5·55	7·15	−1·60	−22
Konkan	9·91	14·97	−5·06	−34
Berar	5·32	6·41	−1·09	−17

4th.—The rainfall of the month was practically normal in Burma and Cachar and in moderate excess in the Assam Valley, as is shown by the following data :—

Division.	Rainfall.			
	Average actual, September 1895.	Average normal, September.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Burma	15·22	16·12	−0·90	−6
Assam (Surma)	16·52	16·46	+0·06	0
Do. (Brahmaputra)	12·57	10·78	+1·79	+17

5th.—It was in moderate to considerable excess in the Peninsula to the south of Lat. 18° N. The following gives data :—

Division.	Rainfall.			
	Average actual, September 1895.	Average normal, September.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Bombay Deccan	9·65	5·48	+4·17	+76
Khandesh	9·52	7·07	+2·45	+35
Hyderabad	10·59	6·87	+3·72	+54
Madras (South Central)	6·49	4·32	+2·17	+50
East Coast (North)	9·09	6·91	+2·18	+32
Do. Do. (a)	9·82	8·63	+1·19	+14
Madras (Central)	7·73	5·36	+2·37	+44
East Coast (Central)	5·28	3·61	+1·67	+46
Do. (South)	7·64	4·86	+2·78	+57
Madras (South)	2·40	2·23	+0·17	+8
Mysore	5·99	4·69	+1·30	+28

October.—The rainfall of the month was chiefly due to the retreating south-west monsoon current of the Bay of Bengal. The storm which was passing northwards up the Bay at the end of September advanced across South into East Bengal and gave a heavy burst of rain on the 2nd and 3rd to South and East Bengal and Cachar. The centre and south of the Peninsula received almost daily rain from the 6th to the 13th, and Southern India from the 13th to the 17th. A diffused cyclonic storm formed in the Bay on the 23rd and 24th. It advanced westwards and crossed the Coromandel coast on the 26th and passed into the Deccan. The

disturbance gave moderate general rain over the greater part of the Peninsula.

The previous statement shows that the rainfall of the first week of the month was determined to Bengal, Assam and Burma and was considerable in amount. This burst was practically the end of the south-west monsoon rains in North-Eastern India. During the remainder of the month the humid current was directed chiefly to the Peninsula. In consequence of the absence of concentrated cyclonic storms the rainfall was generally moderate in amount and favourably distributed. The chief features of the rainfall distribution of the month of October were as follows:—

(*1st*).—The month was almost rainless in the Punjab, Sind, Rajputana, Central India and the North-Western Provinces, and the rainfall of the month was in large defect in the two latter provinces, where it averaged nearly 1½ inches below the normal. The following table gives comparative data:—

Province or Division.	Rainfall.			
	Average actual, October 1895.	Average normal, October.	Variation from normal.	Percentage variation.
	Inch.	Inches.	Inches.	
Punjab	0·10	0·39	—0·29	—74
Sind	0·09	0·03	+0·06	...
Rajputana	0·04	0·29	—0·25	—86
Central India	0·36	1·61	—1·25	—78
North-Western Provinces	0·03	1·41	—1·38	—98

(*2nd*).—The rainfall of the month was in large defect in Berar and the Central Provinces. The following gives data:—

Division.	Rainfall.			
	Average actual, October 1895.	Average normal, October.	Variation from normal	Percentage variation.
	Inches.	Inches.	Inches.	
Berar	1·23	2·58	—1·35	—52
Central Provinces (East)	1·24	2·02	—0·78	—39
Ditto (Central)	0·76	1·85	—1·09	—59
Ditto (West)	0·53	2·08	—1·55	—75

(*3rd*).—The rainfall of the month was more or less considerably in defect in Bengal and Assam, with the exception of East Bengal and Cachar, where it was in slight excess due to the heavy rainfall of the storm of the first week of the month. The following data illustrate these features:—

Division.	Rainfall.			
	Average actual, October 1895.	Average normal, October.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Bihar (North)	0·43	3·58	—3·15	—88
Do. (South)	0·28	3·13	—2·85	—91
Chota Nagpur	2·82	2·87	—0·05	— 2
Bengal (North)	1·81	4·88	—3·07	—63
Do. (Central)	1·83	3·90	—2·07	—53
Do. (Deltaic)	4·51	4·61	—0·10	— 2
Do. (East)	5·75	5·48	+0·27	+ 5
Orissa	5·35	6·16	—0·81	—13
Assam (Surma)	6·17	5·86	+0·31	+ 5
Do. (Brahmaputra)	1·94	3·75	—1·81	—48

(*4th*).—The rainfall of the month was practically normal in the Bombay Deccan, Mysore and the west coast districts, and in slight to moderate excess in Gujarat and Kathiawar, as is shown by the following data:—

Division.	Rainfall.			
	Average actual, October 1895.	Average normal, October.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inch.	
Gujarat	1·67	1·36	+0·31	+23
Kathiawar	1·12	0·69	+0·43	+62
Bombay Deccan	4·73	5·02	—0·29	— 6
Konkan	5·38	5·55	—0·17	— 3
Mysore	5·83	5·52	+0·31	+ 6

(*5th*).—It was in moderate to largish excess in the

Madras coast districts, South Madras and Hyderabad. The following gives data :—

Division.	Rainfall.			
	Average actual, October. 1895.	Average normal, October.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Hyderabad (North)	3·80	2·83	+0·97	+34
Do. (South)	3·96	2·96	+1·00	+34
Madras (Central)	6·57	5·55	+1·02	+18
Do. East Coast (North)	8·58	7·12	+1·46	+21
Do. do. (Central)	10·83	9·75	+1·08	+11
Do. do. (South)	11·84	8·34	+3·50	+42
Do. (South)	10·85	6·04	+4·81	+80
Do. (South Central)	7·91	5·92	+1·99	+34
Malabar	11·35	10·04	+1·31	+13

The following summarizes the chief features of the distribution of the south-west monsoon rainfall of the whole period from June to October 1896 :—

(1st) The most noteworthy feature of the monsoon rains of 1895 was their general deficiency over the whole of India to the north of Lat. 18° N. The following gives comparative data :—

Province.	Rainfall of period, June to October.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Burma	91·15	104·96	—13·81	—13
Arakan	121·99	155·41	—33·42	—22
Assam	73·33	72·59	+ 0·74	+ 1
Bengal	51·63	63·27	—11·64	—18
North-Western Provinces	33·06	33·56	— 0·50	— 1
Punjab	17·58	20·08	— 2·50	—12
Rajputana	13·10	18·82	— 5·72	—30
Central India	29·08	41·36	—12·28	—30
Berar	25·27	?	?	?
Central Provinces	43·40	47·46	— 4·06	— 9
Gujarat	33·49	44·47	—10·98	—25
Kathiawar	21·46	27·32	— 5·86	—21

(2nd) In the preceding large area of general deficiency the rainfall was irregularly distributed. The following gives data of the areas in which there was a local excess :—

Division.	Rainfall of period June to October.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Assam (Brahmaputra)	64·55	59·87	+4·68	+ 8
Orissa	58·85	49·17	+9·68	+20
Bihar (North)	45·69	45·57	+0·12	0
Oudh (North)	37·01	31·12	+5·89	+19
North-Western Provinces (Submontane).	43·22	41·72	+1·50	+ 4
Punjab (West)	7·11	6·07	+1·04	+17

(3rd) The areas in which the rainfall was most persistently scanty throughout the season were as follows. :—

Division.	Rainfall of period, June to October.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Burma, Central	42·56	73·11	—30·55	—42
Bengal (Deltaic)	35·05	48·90	—13·85	—28
Do. (Central)	34·89	48·26	—13·37	—28
Rajputana	13·10	18·82	—5·72	—30
Central India	29·08	41·36	—12·28	—30
Gujarat	33·49	44·47	—10·98	—25

In the following table is given the percentage deficiency in these six divisions, month by month, during the season :—

Division.	June 1895.	July 1895.	August 1895.	September 1895.	October 1895.
Burma, Central	—26	—18	—27	— 6	—37
Bengal (Deltaic)	—18	—39	—29	—39	— 2
Do. (Central)	—33	—11	—29	—30	—53
Rajputana	—20	—29	—15	—80	—86
Central India	+43	—46	—25	—55	—78
Gujarat	— 1	—31	— 2	—61	+23

(4th) The rainfall of the monsoon period was above the normal over the whole of the Peninsula south of Lat. 18° N, with the exception of the Konkan, where it was in slight defect. The excess was considerable to large in amount in the south and centre of the Peninsula. The following table gives comparative data, firstly for the period from June to October, and secondly for the period from June to September :—

Division.	Rainfall of period, June to October 1895.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Hyderabad	32·47	29·30	+ 3·17	+11
Bombay Deccan	32·17	31·81	+ 0·36	+ 1
Konkan	101·59	111·78	−10·19	− 9
Malabar	113·73	112·09	+ 1·64	+ 1
Mysore	26·79	25·60	+ 1·19	+ 5
Madras (South Central)	23·52	18·12	+ 5·40	+30
Do. East Coast (North)	45·42	32·85	+12·57	+38
Do. Do. (Central)	23·14	20·52	+ 2·64	+13
Do. Do. (South)	30·40	23·63	+ 6·77	+29
Do. (Central)	22·57	21·04	+ 1·53	+ 7
Do. (South)	17·03	12·43	+ 4·60	+37

Division.	Rainfall of period, June to September 1895.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Hyderabad	28·59	26·40	+ 2·19	+ 8
Bombay Deccan	27·44	26·79	+ 0·65	+ 2
Konkan	96·21	106·23	−10·02	− 9
Malabar	102·38	102·05	+ 0·33	+ 3
Mysore	20·96	20·08	+ 0·88	+ 4
Madras (South Central)	15·61	12·20	+ 3·41	+28
Do. East Coast (North)	36·84	25·73	+11·11	+43
Do. do. (Central)	12·31	10·77	+ 1·54	+14
Do. do. (South)	18·56	15·29	+ 3·27	+21
Do. (Central)	16·00	15·49	+ 0·51	+ 3
Do. (South)	6·18	6·39	− 0·21	− 3

(5th) The rainfall of the period was in moderate to large defect in Burma and Arakan and in slight defect in Tenasserim, as is shown by the following data :—

Division.	Rainfall of period, June to October 1895.		
	Average actual, 1895.	Average normal.	Variation from normal.
	Inches.	Inches.	Inches.
Tenasserim	153·85	157·75	− 3·90
Burma, Lower	77·03	84·01	− 6·98
Do. Central	42·56	73·11	−30·55
Do. Upper	29·21	?	?
Arakan	121·99	155·41	−33·42

IV.—The Retreating South-West Monsoon Period.—As North Eastern India usually receives moderate rain in October of great importance for the rice crop, the period of the south-west monsoon rains proper terminates in that area with the 31st of October. On the other hand, as the first heavy rain due to the retreating south-west monsoon is frequently received in the third or fourth week of October in the Madras coast districts and Deccan it is desirable to include the rainfall of October in that of the retreating south-west monsoon period in the case of the Peninsula in order to obtain a proper estimate of the whole rainfall of the retreating south-west monsoon. This is done in the following comparative tables.

The distribution of the rainfall of the month of October has been described above. The month of November was unusually dry in the Peninsula. Showers were occasionally received in a narrow belt of the Coromandel coast districts, but the rainfall was everywhere in defect, more especially in South and Central Madras which frequently receive heavy rain from cyclonic storms in November. The meteorology of December was very abnormal. A storm which formed in the Bay at the end of the first week of the month advanced to the mouth of the Megna and gave a heavy local downpour in the Chittagong, Noakhali and Tippera districts. Slight occasional showers fell in the Coromandel coast districts during the next fortnight. A rain storm visited the southern half of the Peninsula during the last three days of the month and gave a very heavy general burst of rain, considerably larger in total amount than the normal rainfall of the month, in South and Central Madras.

The rainfall of the month was practically *nil* over nearly the whole of Northern and Central India and the north of the Peninsula, but was excessive in the southern districts of Madras.

The following gives the more prominent features of the

rainfall of the period in the Peninsula and also in the remainder of India :—

1st.—The rainfall in South and Central Madras from October to December was in moderate excess. It was generally normal in amount or in excess in October and December, but was very deficient in November. The following gives data :—

Division.	Variation of rainfall during			
	October 1895.	November 1895.	December, 1895.	Period October to December 1895.
	Inches.	Inches.	Inches.	Inches.
Madras, East Coast (North)	+1·46	−2·53	−0·98	−2·05
Do. do. (Central)	+1·08	−6·51	−0·03	−5·46
Do. do. (South)	+3·50	−2·39	+2·78	+3·89
Do Central	+1·02	−1·40	+0·52	+0·14
Do. South	+4·81	−2·74	+3·00	+5·07
Do. (South Central)	+1·99	−0·88	+0·37	+1·48
Malabar	+1·31	−2·18	−0·70	−1·57
Mysore	+0·31	−0·69	−0·32	−0·70

2nd.—The rainfall of the period, November and December, was in considerable defect in Burma and normal in Arakan. The following gives comparative data :—

Division.	Rainfall of period, November and December.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Tenasserim	0·58	1·59	−1·01	−64
Lower Burma	0·83	3·95	−3·12	−79
Central do.	1·61	2·99	−1·38	−46
Arakan	4·20	4·09	+0·11	+ 3

3rd.—The rainfall of November and December was in slight to large excess in East Bengal and Cachar, due to the cyclonic downpour in these areas during the cyclonic storm in the second week of December :—

Division.	Rainfall of period, November and December.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Assam (Surma)	3·03	1·46	+1·57	+108
Bengal (East)	1·75	1·53	+0·22	+14

4th.—The total rainfall of the period, November and December, was practically *nil* over nearly the whole of Northern and Central India, Berar and the Central Provinces, as is shown by the following data :—

Province.	Rainfall of period, November and December.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inch.	Inch.	Inch.	
Bengal (excluding East Bengal).	0·14	0·46	−0·32	−70
Bihar	0·09	0·34	−0·25	−74
Chota Nagpur	0·01	0·79	−0·78	−99
North-Western Provinces	0·19	0·42	−0·23	−55
Punjab	0·22	0·72	−0·50	−69
Rajputana	0·08	0·16	−0·08	−50
Central India	0·39	0·74	−0·35	−47
Central Provinces	0·09	0·78	−0·69	−88
Berar	0·13	?	?	?

The year.—The rainfall of the year averaged 2·90 inches below the normal for the whole of India, or 3·38 inches if Burma be included. It was hence 7 per cent. below the normal. The deficiency was chiefly due to the decreased rainfall of the south-west monsoon. The rainfall of the year was in general defect over the whole area including Burma, Northern and Central India, Berar and the Central Provinces. The following gives comparative data :—

Province.	Rainfall, 1895.			
	Average actual.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Burma	120·30	137·80	−17·50	−13
Bengal	64·52	77·74	−13·22	−17
Assam	105·38	106·60	− 1·22	− 1
Bihar	44·15	47·14	− 2·99	− 6
Chota Nagpur	48·65	54·10	− 5·45	−10
North-Western Provinces and Oudh.	36·69	36·51	+ 0·18	0
Punjab	23·72	26·64	− 2·92	−11
Rajputana	14·41	20·13	− 5·72	−28
Central India	30·72	43·74	−13·02	−30
Bombay (North)	20·34	26·47	− 6·13	−23
Berar	27·30	?	?	...
Central Provinces	46·08	50·40	− 4·32	− 9

The rainfall was in local excess in five divisions in this

large area of general deficiency. Data for these areas are given below:—

Division.	Variation of rainfall during				
	Cold weather period.	Hot weather period.	South-west monsoon period.	Retreating south-west monsoon period.	Year.
	Inches.	Inches.	Inches.	Inches.	Inches.
Tenasserim . .	+0·75	+8·33	−3·90	−1·01	+4·17
Orissa . . .	−0·27	−1·93	+9·68	−1·39	+6·09
Oudh (North) . .	+0·87	+0·39	+5·89	−0·39	+6·76
N.-W. Provinces (Submontane).	+1·14	−0·68	+1·50	−0·39	+1·57
Punjab (West) .	−0·23	+1·04	+1·04	−0·24	+1·61

The rainfall was between 10 and 25 per cent. in defect in the following areas:—

Division.	Rainfall during the year.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Arakan	144·71	179·60	−34·89	−19
Bengal (East) . .	77·00	90·31	−13·31	−15
Chota Nagpur . .	48·65	54·10	− 5·45	−10
Bihar (South) . .	38·21	43·05	− 4·84	−11
Punjab (South) . .	11·57	13·78	− 2·21	−16
Do. (Central) . .	16·51	21·00	− 4·49	−21
Do. (Submontane) .	23·83	31·02	− 7·19	−23
Konkan . . .	103·65	115·24	−11·59	−10
Central Provinces (Central).	45·62	51·63	− 6·01	−12
Kathiawar . . .	21·59	28·08	− 6·49	−23
Madras East-Coast (Central).	30·63	35·19	− 4·56	−13

and between 25 and 40 per cent. in the following areas:—

Division.	Rainfall during the year.			
	Average actual, 1895.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Burma (Central) . .	55·97	86·31	−30·34	−35
Bengal (Deltaic) . .	43·74	61·73	−17·99	−29
Do. (Central) . .	41·11	57·32	−16·21	−28
Gujarat	35·57	45·11	−11·54	−26
Central India (East) .	30·72	43·74	−13·02	−30
Rajputana (East) . .	20·36	28·41	− 8·05	−28
Do. (West) . .	8·46	11·84	− 3·38	−29

The rainfall of the year was in moderate excess over nearly the whole of the Peninsula south of Lat. 18° N. This was chiefly due to the increased rainfall of July, September and December. The following gives comparative data:—

Division.	Rainfall during the year 1895.			
	verage actual.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Madras (South Central) . . .	34·88	29·59	+5·29	+18
Mysore	35·27	34·03	+1·24	+ 4
Hyderabad (North) . . .	37·92	35·39	+2·53	+ 7
Do (South) . .	32·55	30·57	+1·98	+ 6
Madras, East Coast (North) .	50·34	40·81	+9·53	+23
Do. do do (a) . .	67·91	60·21	+7·70	+13
Do. do (South) . .	47·49	42·36	+5·13	+12
Do. Central . . .	27·35	26·32	+1·03	+ 4
Do. (South) . . .	33·20	28·83	+4·37	+15

The following gives a statement of the variation of the mean rainfall of India during the past 20 years:—

Year.	Number of districts.			Rainfall.			
	Fall excessive.	Fall normal.	Fall deficient.	Average actual.	Average normal.	Variation from normal.	Percentage variation.
				Inches.	Inches.	Inches.	
1875 . .	16	...	8	43·47	41·09	+2·38	+ 6
1876 . .	6	...	18	36·60	41·09	−4·49	−11
1877 . .	10	...	14	36·81	41·09	−4·28	−10
1878 . .	17	1	6	47·43	41·09	+6·34	+15
1879 . .	16	2	6	42·78	41·09	+1·69	+ 4
1880 . .	13	1	10	39·53	41·09	−1·56	− 4
1881 . .	15	...	9	41·19	41·09	+0·10	0
1882 . .	17	1	6	43·73	41·09	+2·64	+ 6
1883 . .	11	1	12	40·97	41·09	−0·12	0
1884 . .	12	...	10	42·82	41·09	+1·73	+ 4
1885 . .	15	...	7	42·14	41·09	+1·05	+ 3
1886 . .	14	...	8	44·11	41·09	+3·02	+ 7
1887 . .	11	...	11	43·51	41·09	+2·42	+ 6
1888 . .	10	...	12	39·55	41·09	−1·54	− 4
1889 . .	15	...	8	43·50	41·09	+2·41	+ 6
1890 . .	14	1	8	41·77	41·09	+0·68	+ 2
1891 . .	6	...	17	37·55	41·09	−3·54	− 9
1892 . .	15	...	8	46·18	41·09	+5·09	+12
1893 . .	22	...	1	50·16	41·09	+9·07	+22
1894 . .	17	...	6	47·56	41·09	+6·47	+16
1895 . .	5	...	17	38·90	41·09	−2·90	− 7

Concluding Summary.

The large abnormal features of the meteorology of the first six months of the year 1895 in India were very similar to those of the corresponding period of the year 1894. The following gives the chief points of resemblance:—

1894.	1895.
The cold weather was somewhat more disturbed than usual and the rainfall in North-Western India above the normal. The snowfall was excessive in the higher Kashmir ranges, Ladakh and the Karakoram range.	The cold weather period was unusually stormy and the rainfall above the normal in North-Western India. There was heavier snowfall in the whole Himalayan area during the first three months of the year.
(2) March was slightly cooler than usual, and May warmer than usual, more especially in North-East India. Temperature was practically normal in April.	(2) March and April were slightly cooler than usual and May was much hotter than usual, more especially in Northern India.
(3) The rains commenced slightly earlier than usual on the Bengal coast and were about four days later than usual on the Bombay coast. The monsoon currents advanced with unusual rapidity into Central and Upper India, and nearly the whole of India received favourable and abundant rain in June.	(3) The rains commenced at their normal date on the Bengal coast, and were a week later than usual on the Bombay coast. They advanced even more rapidly than usual into the interior of Upper India, and the whole of India received moderate to abundant rain in June.

The chief features of the remaining six months of the year 1895 were generally opposite in character to those of the year 1894, the change from similar to dissimilar conditions occurring in July. The following shows the contrast between the two periods:—

(1) The rainfall of the monsoon was normal or in excess over the whole of India with the exception of the Malabar districts, where there was a slight deficiency. It was in considerable to large excess in Sind, Gujarat, Kathiawar, the North-Western Provinces and Rajputana.	(1) The rainfall of the monsoon period was considerably below the normal over the whole of Northern and Central India, Berar and the Central Provinces, and was most largely in defect in Rajputana, Central India, and West and Central Bengal.
(2) The rains ceased considerably later than usual, and the Gangetic Plain received excessive and very untimely rain in October and the first week of November.	(2) The rains ceased about a month earlier than usual in Northern and Central India, and the Peninsula received the first burst of heavy rain from the retreating south-west monsoon in September, about a month earlier than usual.
(3) The Peninsula received favourable rain in October and November. The rainfall during these two months was excessive and unseasonable in the North-Western Provinces, Bihar, Baghelkhand and the northern districts of the Central Provinces and also in Gujarat, Kathiawar and Cutch. This excessive and untimely rain was due to the abnormal tracks of the cyclonic storms of the period.	(3) During the retreating south-west monsoon the Peninsula received moderate to abundant rain in October. The rainfall was very scanty in November and the first three weeks of December, and confined to the Coromandel coast districts. The whole of Southern India obtained a heavy burst of rain during the last week of the month.
(4) The south-west monsoon retreated earlier from the Bay than usual at the end of November.	(4) The south-west monsoon retreated from the north and centre of the Bay much earlier than usual.
(5) The cold weather rains commenced unusually early in December.	(5) The cold weather rains commenced very early in October and November in Baluchistan, Afghanistan and Kashmir.

Cold weather Period, January and February 1895.—The following table gives mean variation data of the more important meteorological elements for the cold weather period, January and February 1895:—

Meteorological Province.	January and February 1895.						
	Variation from normal of mean monthly pressure.	Variation from normal of mean maximum temperature.	Variation from normal of mean minimum temperature.	Variation from normal of mean aqueous vapour pressure.	Variation from normal of mean humidity.	Variation from normal of mean cloud.	Variation from normal of average actual rainfall.
	"	°	°	"			Inches.
Burma Coast and Bay Islands.	−·018	+0·2	0	−·025	−3	−0·5	+0·36
Burma Inland . .	−·012	+0·4	−1·2	...	...	...	+0·11
Assam . . .	−·001	+0·7	+0·9	+·017	+1	−0·9	−0·48
Bengal and Orissa .	+·004	−0·2	+0·2	−·014	−4	+0·3	−1·02
Gangetic Plain and Chota Nagpur.	+·011	−0·7	+1·4	+·036	+5	+0·1	−1·09
Upper Sub-Himalayas	+·010	−1·4	+1·6	+·043	+9	−0·2	+0·07
Indus Valley and North-West Rajputana.	−·006	+0·8	0	−·017	−5	−0·6	+1·19
East Rajputana, Central India and Gujarat.	−·001	−1·2	+0·8	+·036	+8	−0·1	−0·17
Deccan . . .	+·001	−0·9	+2·1	+·061	+8	+0·8	+0·27
West Coast . .	−·005	−0·3	+0·6	−·010	−2	−0·3	+0·17
South India . .	−·002	−0·2	+0·9	+·007	+1	−0·1	−0·34

It has already been pointed out that the variations from the normal meteorological conditions in January 1895 were inverse to those of February 1895 but similar to those of December 1894. The variations of the means of the period January and February were hence small in amount and of little significance. They appear to indicate:—

1st.—That pressure was in slight general defect, the deficiency being most marked in Burma. Pressure was in slight relative excess in the Gangetic Plain.

2nd.—That the day temperature was generally somewhat lower than usual, and the night temperature in excess to a slight extent, so that on the whole the mean temperature of the period was very slightly above the normal.

3rd.—That the air was generally somewhat damper than usual, but was drier in North-Eastern India and the Indus Valley.

4th.—That there was generally less cloud than usual.

5th.—That the rainfall of the period was in slight to moderate excess over the whole of Central and North-Western India, including the Punjab, the North-Western Provinces, Rajputana and Central India. It was in marked defect in North-Eastern India and the peninsula generally.

A reference to the monthly weather summaries for the year 1894 will show that there was a considerable resemblance between the cold weather period of that year and of the year 1895. These periods were both marked by a slight excess of temperature, by increased humidity and slightly heavier rain than usual in North-Western India. The following gives comparative data for the cold weather periods of the years 1892 to 1895 for the area including the Punjab, Rajputana, the North-Western Provinces and Bihar.

Cold weather period of—	Variation from normal in North-Western India of—			
	Temperature.	Humidity.	Cloud.	Rainfall.
1895	+0·8	+ 5	—0·2	+0·43
1894 . .	+0·6	+10	+1·3	+0·92
1893	—4·2	+11	+1·4	+2·04
1892	+2·5	— 2	—0·2	—0·37

The precipitation of the cold weather period in North-Western India was above the normal in each of the years 1893, 94 and 95. The excess was greatest in the year 1893 and was least in 1895 for which it was also small in amount. Temperature was slightly above the normal in the years 1894 and 1895. This was chiefly due to the earlier termination than usual of the winter rainfall, and to the abnormally high temperature of the month of February in both years.

The variations of the temperature and humidity conditions were evidently determined by the distribution of the rainfall during the period and hence by the distribution and character of the cold weather storms of December 1894 and January and February 1895. The chief characteristics of the storms of the period were as follows:—

(1) The number of depressions and cold weather disturbances was larger than the normal.

(2) The disturbances were (with one exception) feeble and ill-defined, and did not give rise to deep secondary depressions in the Punjab.

(3) The precipitation accompanying these disturbances in the Afghan and Himalayan areas fell as rain to much higher levels than in normal cold weather periods and more especially than in 1893 when snow fell to levels of 1,800 feet above the sea in the Afghan and North Punjab hills.

(4) The precipitation in the Punjab was light in each storm, but the total fall was, in consequence of the number of storms, slightly larger than usual.

(5) The precipitation accompanying these disturbances was practically restricted to North-Western India and Assam. The Gangetic Plain, except the most western portions, obtained little or no rain.

The preceding remarks indicate that the chief features and characteristics of the cold weather storms of 1894-95 were remarkably persistent.

An examination of the pressure and other conditions obtaining in India before and during the cold weather periods of these two years, throws little or no light on the abnormal features of these storms. This suggests that they were related either to conditions in the upper atmosphere over Northern India or to conditions outside of India.

The following tables give vertical pressure anomalies for the cold weather period of 1894-95, and also those of 1893-94 for comparison:—

Hill and plain stations.	Vertical pressure anomaly.						
	September 1894.	October 1894.	November 1894.	December 1894.	January 1895.	February 1895.	Mean of period, November 1894 to February 1895.
	"	"	"	"	"	"	"
Leh and Lahore .	—·003	+·024	—·008	—·035	—·025	+·116	+·012
Quetta and Jacobabad	+·001	+·009	—·011	—·030	—·014	+·059	+·001
Murree and Peshawar.	+·001	+·013	—·013	—·037	—·030	+·057	—·006
Simla and Ludhiana .	—·007	+·022	—·023	—·030	—·044	+·016	—·020
Chakrata and Roorkee	+·028	+·049?	—·003	+·002	+·009	+·030	+·010
Ranikhet and Bareilly	+·011	+·032	—·005	—·001	+·005?	+·014	+·003
Darjeeling and Dhubri	—·034	+·004	—·025	+·002	+·016	+·011	+·001
Mount Abu and Deesa	—·011	—·013	—·014	0	—·009	—·004	—·007
Pachmarhi and Hoshangabad.	+·021	+·010	+·007	+·027	+·012	+·007	+·013

Hill and plain stations.	Vertical pressure anomaly.						
	September 1893.	October 1893.	November 1893.	December 1893.	January 1894.	February 1894.	Mean of period, November 1893 to February 1894.
Leh and Lahore .	—·015	+·002	—·009	+·041	—·081	+·048	0
Quetta and Jacobabad	0	+·022	—·003	+·054	—·027	0	+·006
Muree and Rawalpindi	—·014	—·004	—·016	+·016	—·049	+·002	—·012
Simla and Ludhiana .	—·015	—·024	—·046	—·014	—·029	+·022	—·015
Chakrata and Roorkee	+·003	—·016	—·038	—·024	—·012	+·035	—·010
Ranikhet and Bareilly	+·004?	+·014?	+·001?	+·004?	+·006?	+·034?	+·011?
Darjeeling and Dhubri	—·001	+·014	—·007	—·005	+·029	+·049	+·017
Mount Abu and Deesa	—·014	—·011	—·010	+·021	—·001	+·011	+·003
Pachmarhi and Hoshangabad.	+·038	+·036	+·043	+·008	?	+·046	?

The following features of the vertical pressure anomalies were common to the two periods—

(1) The anomalies were small but negative in September.

(2) The anomalies were negative in November and January in both the years, and were moderate in amount.

(3) The anomalies were positive in February and moderately large in amount.

(4) The mean anomalies for the whole period were negative in the case of the Upper India stations.

Hence in the cold weather of 1894-95, as in that of 1893-94, the vertical pressure anomalies were negative indicating deficient pressure in the middle atmospheric strata relative to the lower strata. This feature was very slightly exhibited in September. The relative deficiency of pressure was moderately large in January 1895 and small to moderate in November and December 1894 and hence the anomalies were small and less pronounced in 1894-95 than in 1893-94 and much less marked than in 1892-93.

The following table gives the mean vertical pressure anomalies for the cold weather periods of the past five years for comparison :—

Pair of Stations.	Vertical pressure anomaly.					
	1894-95.	1893-94.	1892-93.	1891-92.	1890-91.	1889-90.
Leh and Lahore . . .	+·009	—·004	—·046	+·040	—·025	·0 53
Quetta and Jacobabad . .	+·001	+·006	—·007	+·063	—·038	+·047
Murree and Rawalpindi .	—·008	—·012	—·032	+·037	?	?
Simla and Ludhiana . .	—·017	—·015	—·049	+·017	—·020	+·037
Chakrata and Roorkee . .	+·010	—·010	—·022	+·039	+·015	+·077
Ranikhet and Bareilly . .	+·003	+·011?	+·013?	+·030	?	?
Darjeeling and Dhubri . .	+·001	+·017	—·008	+·026	—·004	+·039
Mount Abu and Deesa . .	—·007	+·003	?	+·027	+·016	?
Pachmarhi and Hoshangabad.	+·013	?	+·005	+·024	?	?

The meteorology of the cold weather 1894-95 is hence in accordance with and confirms the conclusions given in page 574 of the Annual Summary for the year 1893, *viz.*:—

(1) Pressure is invariably in defect at the hill stations relatively to the adjacent plain stations in Northern India and hence in the middle atmospheric strata in Northern India in cold weather seasons of abundant rainfall.

(2) Pressure is invariably in excess in the middle atmospheric strata over Northern India (*i. e.*, vertical pressure anomalies are positive) in cold weather seasons of deficient rainfall.

(3) The mean variations in the cold weather rainfall over Northern India from season to season are, roughly speaking, proportional to the magnitude of the vertical pressure anomalies of the period.

(4) The character of the vertical pressure anomalies during the cold weather, and hence of the probable cold weather rainfall, is usually indicated in the preceding months of November and December, more especially when considered in combination with the character of the rainfall of the preceding south-west monsoon.

An examination of the Indian monsoon area charts and of the charts in the weekly weather reports issued by the English Meteorological office indicates the conditions which obtained in Europe during the inception of the storms of the period.

Date and character of storm.	Area of formation.	Weather conditions in East and South-East Europe.
Feeble depression of the 2nd to the 5th December 1894.	Baluchistan . .	An anti-cyclone covered East Europe and a stationary depression the Central Mediterranean. Weather was slightly disturbed in Persia from the 19th November to the beginning of December.
Shallow depression of the 9th to the 15th December.	Asiatic Turkey .	An anti-cyclone lay over East and South Europe and a stationary depression over Italy.
Feeble depression of the 22nd to the 26th.	Persia . . .	An anti-cyclone lay over the whole of Eastern Europe.
Shallow depression of the 24th to the 31st.	Persia . . .	An anti-cyclone covered East Europe and a shallow low pressure area, stationary from the 20th to the 25th, South-East Europe.
Feeble depression of the 5th to the 12th January 1895.	Persia . . .	High pressure conditions obtained over East Europe and a stationary depression covered the Central Mediterranean from the 7th to the 10th.
Feeble depression of the 20th to the 23rd.	Western Persia .	Anti-cyclonic conditions obtained in South and South-East Europe from the 15th to the 24th.
Shallow depression of the 1st to the 4th February.	Persia . . .	Anti-cyclonic conditions prevailed in Russia from the 26th January to the 4th February. A stationary depression lay over the Central Mediterranean from the 28th January to the 1st February.
Feeble depression of the 8th to the 12th.	Persia . . .	Anti-cyclonic conditions obtained in Northern and Eastern Russia. Two depressions advanced eastwards over the Mediterranean between the 1st and 12th. The Persian depression was probably the continuation of the first.

The preceding data indicate that with possibly one exception the cold-weather storms of 1894-95 in India were not the continuation of European storms and that anticyclonic conditions prevailed to the north and north-west of Persia during their initiation. Six out of the eight storms formed over the Persian plateau.

Hot weather period, March to May 1895.—The following table gives the mean variations of the more important meteorological elements in the ten meteorological provinces of India for the hot weather period, March to May 1895 :—

Meteorological Province.	Hot Weather 1895. Variation of pressure from normal.	Variation from normal of maximum temperature.	Variation from normal of minimum temperature.	Variation from normal of aqueous vapour pressure.	Variation from normal of humidity.	Variation from normal of cloud.	Variation of average actual rainfall of period from normal.
	"	°	°	"			Inches.
Burma Coast and Bay Islands.	−·012	−0·8	+0·6	+·004	+1	+1·5	+3·09
Assam . . .	0	+0·2	+0·3	+·009	0	+0·2	−1·62
Bengal and Orissa .	−·006	−0·5	−0·2	−·036	−4	+0·6	−1·11
Gangetic Plain and Chota Nagpur.	−·003	−1·9	+0·4	+·040	+·4	+0·7	−0·07
Upper Sub-Himalayas	−·009	+0·2	+1·7	+·047	+3	−0·2	−0·95
Indus Valley and North-West Rajputana.	−·016	+2·0	+1·7	+·015	0	−0·3	+0·72
East Rajputana, Central India and Gujarat.	−·004	−0·2	+0·9	+·036	+3	+0·1	−0·02
Deccan . . .	0	−1·0	+0·3	+·046	+4	0	−0·19
West Coast . .	+·004	+0·4	+0·6	−·010	−2	−0·1	−3·70
South India . .	+·001	−0·3	−0·4	−·013	0	−0·5	−0·34

The previous table gives means for the whole period and indicates that on the average of the period pressure was in slight defect, temperature in slight to moderate excess, humidity slightly above the normal, and cloud somewhat greater than usual in India. The mean pressure of the Indian land area was ·018″ in defect in March, ·013″ in excess in April and ·007″ in defect in May and hence averaged ·004″ in defect for the hot weather period and was practically normal. Numerous series of thunderstorms occurred in Burma, North-Eastern India, the Deccan and Southern India in the months of March and April, and temperature in these two months was generally below the normal to a slight or moderate extent over the whole of India except Upper India and Baluchistan, where it was steadily in excess, and the continuation of the conditions established in February. The local variations of pressure from the general condition in these months were small and apparently of little importance. The month of May was abnormally hot over the whole of Northern and Central India, the area of greatest excess of temperature including Upper Sind, West Rajputana, the Punjab and Baluchistan. The exaggerated hot weather conditions of May gave rise to the following abnormal features of the pressure distribution in that month :—

(1) General deficiency relatively to the mean condition over the whole of Northern India, the deficiency being most marked in the Punjab, the area of greatest excess of temperature.

(2) General excess of pressure in the Peninsula, greatest in the West Coast districts from Kathiawar to North Malabar.

(3) Excess of pressure at the level of the hill stations as compared with the neighbouring plains.

It is interesting to compare the meteorology of May 1895 with the meteorology of the corresponding months of the years 1879, 1880, 1890, 1892 and 1894. The winter snowfall of these years was (with the exception of the year 1894) considerably or largely in defect and (with two exceptions) the hot weather characterized by excessive temperature, more especially in May.

The following gives data showing the variation of the mean pressure of the whole of India from the normal in these months :—

Year.	Variation from normal of mean pressure of month.
	"
May 1879	−·045
,, 1880	−·022
,, 1890	−·022
,, 1892	−·027
,, 1894	−·023
,, 1895	−·007

The following gives mean temperature variation data of Northern India (including Bihar, the North-Western Provinces, the Punjab, Upper Sind and Rajputana).

Month and Year.	Variation of mean temperature in Northern India.	Area of greatest variation.	Amount of greatest variation.
	°		°
May 1879 . . .	+4·0	North-Western Provinces.	5·0
,, 1880 . . .	+2·0	...	...
,, 1881 . . .	normal.	...	...
,, 1882 . . .	normal.	...	...
,, 1890 . . .	+1·5	Punjab . . .	2·5
,, 1892 . . .	+3·0	West Punjab . .	5·5
,, 1894 . . .	+3·0	Chota Nagpur . .	5·0
,, 1895 . . .	+4·0	Punjab . . .	6·0

The data of the preceding table show that the temperature conditions of May 1881 and 1882 were normal. In each of the months of May 1879, 1880, 1890, 1892 and 1894 temperature was considerably above the normal, due largely, if not solely, to deficient precipitation in the cold-weather period over the plains and adjacent mountain areas of Northern India. In each of these months the mean pressure of the Indian area was in defect, the deficiency averaging —·028″ and almost identical in amount with this in four out of the five years.

Excessive temperature in the month of May invariably gives rise to a larger diminution of pressure over the Indian area than that normal to the month and hence to a deficiency of pressure (as compared with the normal). This decrease of pressure is chiefly, if not solely, a temperature effect.

This is confirmed by the fact that in each of these months (*viz.*, May 1879, 1880, 1890, 1892, 1894 and 1895) pressure was in relative excess or the vertical pressure anomalies were positive at the hill stations in Northern India. This is established by the following data for six pairs of stations:—

Pair of Stations.	Vertical Pressure Anomaly in May.					
	1879.	1880.	1890.	1892.	1894.	1895.
	″	″	″	″	″	″
Quetta and Jacobabad	?	?	+·006	+·050	+·037	+·063
Leh and Lahore	?	+·069	+·063	+·125	+·082	+·101
Murree and Rawalpindi	+·040	+·038	+·041	+·035	+·028	+·057
Simla and Ludhiana	?	?	+·033	+·049	+·042	+·060
Darjeeling and Calcutta	+·032	+·007	+·002	+·003	+·023	+·033
Mount Abu and Dessa	?	+·005	+·002	?	—·023	—·010
Mean	+·036	+·030	+·025	+·052	+·032	+·051

The large positive vertical anomalies were evidently in each case the result of the excessive temperature conditions of the month in Northern India, which, by the various air movements which they either strengthened or initiated, diminished pressure very largely at the level of the plains in Northern India and to a much smaller extent at the level of the hills, thus giving positive vertical pressure anomalies, the magnitude of which increased with elevation and which were greatest for Leh and Kailang.

A second interesting feature of the meteorology of the month of May in each of these years is that pressure was in local excess in the Peninsula, more especially in the West Coast districts, and in local defect in Northern India. The following table gives data in illustration:—

Area.	Station.	Pressure anomaly of May.					
		1879.	1880.	1890.	1892.	1894.	1895.
		″	″	″	″	″	″
Northern India.	Calcutta	+·003	+·002	—·001	—·019	—·035	—·024
	Patna	—·014	+·019	—·013	—·037	—·055	—·030
	Allahabad	—·012	0	0	—·030	—·037	—·040
	Lahore	—·003	—·030	—·019	—·036	—·031	—·038
	Mooltan	+·013	—·027	—·016	—·045	—·036	—·048
	Peshawar	+·026	—·036	—·005	—·029	—·014	—·022
Western India and Malabar.	Rajkot	—·014	+·005	+·044	+·050	+·059	+·044
	Bombay	—·040	+·012	+·025	+·021	+·050	+·043
	Karwar	?	+·030	+·031	+·015	+·050	+·049
	Poona	+·016	+·012	+·027	+·035	+·044	+·030
	Belgaum	—·022	—·005?	+·014	+·027	+·047	+·036
	Cochin	—·007	—·010	?	+·036	+·035	+·034
	Calicut	?	?	?	+·022	+·035	+·032

The preceding data establish that generally, if not invariably, exaggerated hot weather conditions in Northern India in May tend to give a larger deficiency of pressure in that area than the mean deficiency of the whole of India and a smaller deficiency in the Peninsula (more especially in the West Coast districts) or in other words to give negative pressure anomalies in Northern India and positive anomalies in the Peninsula. This is mainly, if not entirely, a result of the abnormal temperature conditions of the period.

It may hence be laid down as a general rule that strongly marked hot weather conditions (*i.e.*, of increased temperature and greater dryness of the air) in Northern India in the month of May accompany or initiate the following pressure conditions:—

(1) General deficiency of pressure over India.

(2) Relative excess of pressure at the level of the hill stations in Northern India as compared with that at the level of the plains.

(3) Relative deficiency of pressure in Northern India, usually most marked in or near the area of greatest excess of temperature.

(4) Relative excess of pressure in the Peninsula, greatest in amount in the West Coast districts, Gujarat and Kathiawar. If the deficiency of pressure in Northern India is most marked in Chota Nagpur, the relative excess in the Peninsula is greatest in the Konkan and Malabar. If, on the other hand, the excess of temperature and deficiency of pressure be greatest in Upper India, the area of greatest excess of pressure in Western India usually includes Kathiawar, Gujarat and the Konkan.

It will be seen that the abnormal pressure conditions of May 1895 were in strict accordance with the temperature

conditions, and that the variations of the temperature and pressure (also humidity) conditions were very similar to those of May 1892 and May 1894.

That these conditions are the result of the prevalence of higher temperature than usual in Northern India in May is further confirmed by the fact that the same conditions in an exaggerated form prevailed during the periods of greatest and most abnormal excess of heat in Northern India in May 1895.

It has been pointed out that the highest temperatures and the greatest excess of temperature in Northern India during the year 1895 obtained on the 27th and 28th May.

The following gives data showing the variations of the temperature conditions from the normal on these dates :—

Province.	Variation from normal of					
	Maximum temperature.		Minimum temperature.		Mean temperature.	
	27th May.	28th May.	27th May.	28th May.	27th May.	28th May.
Bengal	0	+ 5·1	+ 2·9	+ 5·3	+ 1·5	+ 5·2
Bihar	− 1·0	+ 8·9	+ 3·2	+ 6·3	+ 1·1	+ 7·6
Chota Nagpur	+12·1	+13·2	+10·5	+10·2	+11·3	+11·7
North-Western Provinces.	+ 6·1	+ 8·9	+ 4·3	+ 6·8	+ 5·2	+ 7·9
Punjab	+ 7·9	+ 9·2	+ 2·3	+ 5·0	+ 5·1	+ 7·1
Rajputana	+ 5·2	+ 5·3	+ 2·6	+ 1·6	+ 3·9	+ 3·5
Central India	+ 2·8	+ 2·6	+ 3·4	+ 3·2	+ 3·1	+ 2·9
Central Provinces	+ 4·4	+ 3·9	+ 2·3	+ 1·9	+ 3·4	+ 2·9
Deccan	+ 0·1	+ 2·4	+ 0·4	+ 2·6	+ 0·3	+ 2·5
Bombay Coast	+ 0·7	+ 1·0	+ 2·4	+ 0·7	+ 1·6	+ 0·9
Madras Coast	+ 1·7	+ 4·0	+ 1·2	+ 2·0	+ 1·5	+ 3·0

The preceding data indicate that temperature averaged about 5° in excess in North-Western India and upwards of 10° in excess in an area including Chota Nagpur, and the neighbouring districts of South Bihar and West Bengal.

The following gives mean pressure variation and anomaly data for these dates :—

Area.	Variation from normal of mean 8 A.M. pressure.		Anomaly.	
	27th May.	28th May.	27th May.	28th May.
	″	″	″	″
Bengal	−·166	−·169	−·125	−·115
Bihar	−·216	−·218	−·175	−·164
Chota Nagpur	−·111	−·115	−·070	−·061
North-Western Provinces	−·176	−·185	−·135	−·131
Punjab	−·119	−·164	−·078	−·110
Rajputana	−·051	−·056	−·010	−·002
Central India	+·007	−·012	+·048	+·042
Central Provinces	+·014	−·007	+·055	+·047
Deccan	+·083	+·076	+·124	+·130
Bombay Coast	+·112	+·098	+·153	+·152
Madras Coast	+·062	+·025	+·103	+·079

Pressure averaged ·043″ in defect over the Indian area on the 27th and ·054″ on the 28th. The general deficiency was hence large and marked and considerably greater than the mean deficiency stated in the preceding page of the month of May when the hot weather conditions are most pronounced, *viz.*, —·028. Pressure was in large relative defect in Northern India and in large relative excess in the Peninsula.

Pressure was most largely in defect in Bihar (in and near the area of greatest excess of temperature). The negative anomaly averaged ·17″ for that area on the 27th and 28th. Pressure was, on the other hand, most largely in excess on the West Coast between Bombay and Cochin for which area the positive anomalies averaged ·15″. It is further clear from the preceding conditions that the pressure anomalies (general and local) are roughly proportional to the excess of temperature or to the relative intensity of the temperature conditions.

The following table gives vertical pressure anomalies for these dates :—

Pair of Stations.	Vertical pressure anomaly.	
	27th May.	28th May.
	″	″
Quetta and Jacobabad	+·069	+·071
Leh and Lahore	+·159	+·198
Murree and Rawalpindi	+·070	+·102
Simla and Ludhiana	+·074	+·099
Darjeeling and Purnea	+·043	+·083
Mount Abu and Deesa	−·033	−·049

The vertical pressure anomalies were very large in amount for these dates, thus further confirming the general conclusions that the special pressure conditions of the month of May 1895 and more especially those of the 27th and 28th of that month were chiefly, if not solely, a direct result of the abnormal temperature conditions of the period in India. It may be pointed out that the change from the temperature conditions of April (*viz.*, slight deficiency) to those of May (*viz.*, general and large excess)

reversed the signs of the pressure anomalies in India. This is shown very fully by the data of the following table:—

Meteorological Province.	Mean pressure anomaly.		
	March.	April.	May.
	"	"	"
Burma Coast and Bay Islands	−·012	−·013	+·002
Assam	−·007	+·014	−·019
Bengal and Orissa	−·001	+·019	−·023
Gangetic Plain and Chota Nagpur	+·004	+·023	−·025
Upper Sub-Himalayas	0	+·013	−·028
Indus Valley and North-West Rajputana	−·006	−·024	−·006
East Rajputana, Central India and Gujarat.	+·005	−·013	+·009
Deccan	+·007	−·003	+·007
West Coast	−·012	−·005	+·042
South India	+·001	−·005	+·019

The following table gives vertical pressure anomalies for each month of the hot weather period of 1895 in Northern India determined from the variation data of six pairs of stations. It will be seen that the vertical pressure anomalies which were practically *nil* in March and April were positive and large in amount in May:—

Pair of Stations.	Vertical pressure anomaly in—		
	March 1895.	April 1895.	May 1895.
	"	"	"
Quetta and Jacobabad	−·001	+·034	+·063
Leh and Lahore	+·024	+·012	+·109
Murree and Peshawar	+·009	+·008	+·043
Simla and Ludhiana	−·010?	−·013	+·060
Darjeeling and Dhubri	+·001	−·031	+·025
Mount Abu and Deesa	+·004	−·001	−·010

The meteorology of India during the hot weather of 1895 was determined mainly, if not entirely, by meteorological actions and conditions in India itself and by the distribution of the snowfall in the Himalayan area during the preceding winter months.

The winter snowfall was generally normal or somewhat heavier than usual in Upper India and terminated considerably before the normal date. The extent of snow-clad surface at the end of January was probably slightly below the normal. February was a very dry month and the accumulated snow hence melted earlier and quicker than usual. This was more especially the case in Baluchistan and Afghanistan. Temperature was hence more or less considerably above the normal in February, more especially in Upper India, the area most affected by variations in the amount and duration of the winter snowfall in the Western Himalayas and Afghanistan.

The meteorology of the next two months did not differ largely from the normal. Hot weather conditions set in slightly earlier than usual in Northern India. March was on the whole drier than usual, especially in North Eastern India, and the spring rains in Assam were considerably delayed. April was somewhat more disturbed with hot weather storms than usual. The rainfall of the month was hence moderately to considerably in excess in the areas where the hot weather storms of the period gave moderate to heavy thunder showers, more especially Chota Nagpur and South Bihar, East Bengal, Cachar and Southern India. Temperature was in moderate defect in these areas but was normal or in slight excess in North Western India. The month of May was unusually hot and dry. Hot weather conditions of the most intense type prevailed over the whole of Northern and Central India as is almost invariably the case after a milder and drier winter than usual in the Western Himalayas (more especially when the snowfall is light or moderate in March). These conditions gave remarkably strong and steady westerly winds in the Gangetic Plain. As already pointed out an important effect of the excess of temperature in North-Eastern India was to diminish pressure locally in that area to a large extent. The local sea winds blowing across the Bengal Coast were much stronger than usual and were determined more to the east than usual. Assam, East and North Bengal hence received frequent series of thunderstorms which gave more or less heavy rain and the rainfall of the month was in considerable to large excess in Cachar and East Bengal. The intensified hot westerly winds of the Gangetic Plain extended further eastwards across South Bihar and Chota Nagpur than usual and gave abnormally dry and hot weather in West Bengal. Hence as in May 1894 the contrast between the meteorological conditions of East and West Bengal was very striking. The following data for two stations in each area show the contrast:—

Station.	Variation from normal in May 1895 of—						
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	Mean aqueous vapour pressure.	Mean humidity	Mean cloud amount.	Total rainfall.
	°	°	°	"	°		Inches
East Bengal: Narayanganj	−0·3	+1·8	+0·8	+·009	−1	+1·9	+1·47
East Bengal: Chittagong	+0·3	+0·1	+0·2	+·038	+3	+1·1	+2·95
West Bengal: Burdwan	+2·4	+2·7	+2·6	+·008	−3	+0·9	−1·57
West Bengal: Berhampore	+2·4	+2·1	+2·3	+·042	−4	+0·6	−4·28

South-West monsoon period, June to September 1896.—The meteorological conditions in the Indian land area antecedent to the establishment of the south-west monsoon were favourable to a strong monsoon and also to its rapid extension to its limits in Upper India. The following gives the most prominent and important of these antecedent conditions :—

(1) The cold weather rainfall was normal or in slight to moderate excess in North-Western India and the snowfall probably normal in the Punjab and Kashmir Himalayas. The snow line in the storms did not descend so low as in the winter of 1893 and the fall on the lower ranges was hence small in amount. The winter precipitation ceased unusally early about the middle of February.

(2) The snow accumulation at the end of March was small in amount in the lower ranges from 8,000 to 12,000 feet in elevation and moderate on the highest ranges in the Punjab and Kashmir Himalayas. The winter accumulation melted very rapidly in March.. There was hence no unusual extension of snow-clad surface in April and the extent of snow-clad surface was considerably below the normal at the end of May. Hence the temperature conditions of India in May were such as usually obtain after winters of deficient snowfall in the Western Himalayas.

(3) Ordinary hot weather temperature conditions obtained in March and April and strongly marked hot weather conditions in May. Temperature was largely in excess in the month of May in Northern and Central India and more especially in Rajputana, the Punjab, Upper Sind and Baluchistan.

(4) The weather in Northern and Central India in May was characterized by excessive dryness and deficient rainfall and by the abnormal prevalence of strong hot westerly land winds (more especially in the last week of the month) and hence by more intense hot weather conditions than usual.

(5) Weather was finer and clearer than usual during the months of April and May in the Himalayan area, and the snowfall in the winter months practically ceased to affect the temperature of the high level stations of Leh and Kailang at the end of March.

(6) Pressure was in moderate general defect over the Indian area during the period. The temperature conditions of May intensified the local pressure anomalies which obtained in March and April, the chief feature in May being a largish local deficiency in Northern India, greatest in the Gangetic Plain, and a moderate local excess in the western half of the Peninsula, more especially the west coast districts. The distribution of the snow accumulation with regard to elevation during the winter was evidently such as could produce no large effect on the temperature conditions in India at the commencement of the hot weather. The prevalence of even finer weather than usual over the Himalayan area in May favoured the rapid development of hot weather conditions in India during these months, and hence May 1895 was noteworthy for the intensity of the hot weather over the greater part of Upper India.

There were, however, slight indications in May of a feebler determination than usual of humid winds from the equatorial belt northwards to the Indian area and hence in virtue of the strongly marked tendency for the monsoon currents to maintain the same general features (amidst a certain amount of oscillatory variation) throughout the whole season there was a slight probability based on these antecedent conditions that the monsoon currents would be feebler than usual, and that of the two branches of the monsoon current the Bay of Bengal branch would probably be stronger or less weak relatively to the normal than the Bombay current. This was indicated in the forecast of the season published in the India Gazette of the 6th June in the following terms :—

"The information received up to date from ships and other sources of information of the pressure and weather conditions of the neighbouring seas and more especially of the northern half of the Indian Ocean suggests that the south-east trades are not strong this year, and hence that the conditions in the sea areas are less favourable for a strong monsoon than they were last year."

"It should, however, be carefully remembered that the past three years have been a period of excessive rainfall in India due to general conditions extending over the Indian Ocean as well as Southern Asia, and probably over a still larger area. There are slight indications that these general conditions are now changing and in the absence of information for the greater part of the whole Indian monsoon land and sea area, it is not possible to judge how far this change may be affecting the strength of the south-east trades in the Indian Ocean, and hence also the commencement and strength of the south-west monsoon currents during the present year."

"It is therefore necessary to accept the inferences given below with greater reserve than usual, and if it should result that the monsoon currents are (notwithstanding the presence of favourable conditions in India) as much below their normal strength as they were above it in 1893 (when the antecedent conditions in India were on the whole unfavourable) the inferences will require to be suitably modified."

In a letter received from the Port Officer, Mahe, Seychelles, dated August, it is stated "The weather from May to the end of July inclusive was very unusual and up to the 1st August, except for short periods, the south-east trades have been very feeble compared with previous years and on an average the winds have been more southerly and in fact, theweather we have had during the month of June was similar to what we generally get in Seychelles in the latter part of April or during May. I was under the impression

that the monsoon with accompanying rains would arrive on the coast of India very late this year."

The inference was in accordance with facts as both currents, but more especially the Bombay current, were below their normal strength. The chief features establishing the decreased intensity and volume of the currents were:—

1st.—The delay in the advance of southerly humid winds in the Arabian Sea in June.

2nd.—The decreased strength of the lower air movement in India during the monsoon period, June to September, and more especially at the coast stations of the Arabian Sea.

3rd.—The decreased rainfall over nearly the whole of Northern and Central India, the decrease relatively to the normal precipitation of the period increasing from the coast districts to the more distant interior districts, *viz.*, Central India, Rajputana and the Punjab.

4th.—The prolonged break in the rains in July over the whole of North-Western India, due apparently to weakness of the current at the time and not to local conditions in Upper India or the Himalayan area.

5th.—The early withdrawal of the monsoon currents from Northern India, on the average of the whole area about a month earlier than usual.

The following gives a very brief summary of the chief features of the south-west monsoon period of 1895:—

Meteorological Province.	Mean variation from normal during south-west monsoon period June, to September 1895 of							
	Mean pressure.	Mean maximum temperature	Mean minimum temperature.	Mean temperature.	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.	Total rainfall.
	"	°	°	°	"			Inches.
Burma Coast and Bay Islands.	—·006	+0·9	+1·0	+1·0	+·023	—1	+0·9	—7·81
Burma Inland	—·004	+0·1	+0·8	+0·5	?	?	?	—1·79
Assam	+·012	—0·3	—0·1	—0·2	+·011	0	—0·3	+15·44
Bengal and Orissa.	+·011	+0·6	+0·3	+0·5	—·006	—2	+0·2	—8·25
Gangetic Plain and Chota-Nagpur	+·015	+0·2	—0·2	0	—·006	—1	+0·3	—1·35
Upper Sub-Himalayas.	+·017	—0·6	—0·1	—0·4	+·017	+2	—0·1	—3·00
Indus Valley and North-West Rajputana.	+·016	+1·0	+0·3	+0·7	+·024	+1	—0·1	+0·02
East Rajputana, Central India and Gujarat.	+·019	+1·1	+0·1	+0·6	+·006	—1	—0·4	—7·00
Deccan	+·014	+0·9	+0·5	+0·7	+·014	+1	+0·1	—2·21
West Coast	+·001	+0·7	+0·9	+0·8	—·003	—2	+0·1	—9·74
South India	+·002	—0·2	+0·2	0	—·007	—1	+0·7	+2·31

The general abnormal conditions of the period were related to each other and were in fact dependent upon the deficient rainfall of the period in Northern and Central India. There was, on the whole, somewhat less cloud than usual, and the humidity was below the normal. Temperature was in excess, the increase being chiefly exhibited in the day temperature. Pressure was in slight excess, due in part at least, to a smaller volume of ascensional movement than usual.

The following gives comparative rainfall data for the period for reference:—

Province or division.	South-west monsoon period, June to September 1895.			
	Average actual.	Average normal.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Punjab	12·06	14·73	—2·67	—18
Rajputana	13·07	18·53	—5·46	—29
Central India	28·72	39·75	—11·03	—28
North-Western Provinces and Oudh.	33·03	32·14	+0·89	+3
Bihar	40·17	38·98	+1·19	+3
Chota Nagpur	40·53	45·50	—4·97	—11
Bengal	48·16	58·55	—10·39	—18
Berar	24·04	31·01	—6·97	—22
Central Provinces	42·56	45·48	—2·92	—6
Madras	32·88	29·39	+3·49	+12
Bombay	34·73	38·98	—4·25	—11
Burma	78·99	106·02	—27·03	—25

The chief features of the rainfall of the whole period were as follows:—

(1) The rainfall was in defect over the Indian area. The deficiency for the period, June to September, averaged 5·84 inches and for the period, June to October, 4·76 inches.

(2) Rainfall was more or less below the normal over nearly the whole of Northern and Central India, North Bombay, Berar and the Central Provinces.

(3) It was most largely in defect, relatively to the normal, in Deltaic and Central Bengal, Central India and West Rajputana and probably Central Burma.

(4) It was in slight excess in three divisions, *viz.*, North Oudh, Orissa and the West Punjab, in the area of general deficiency and was practically normal in amount in Bihar and the North-Western Provinces.

(5) Rainfall was in considerable defect in Burma.

(6) Rainfall was in moderate excess over the central and southern districts of the Peninsula.

The combination of a feeble south-east trades circulation and the presence of favourable conditions in India

during the hot weather month of May 1895 appears to be sufficient to account for the following features of the rainfall of the south-west monsoon period:—

(1) The delay in the establishment of the monsoon currents over the Indian seas and the coast districts of India in the beginning of June.

(2) Their rapid extension over the Indian land area to the limits of the Punjab in the third week of June.

(3) The feebleness and unsteadiness of the monsoon currents.

(4) The early withdrawal of the monsoon currents from Northern India, shown most clearly by the termination of the monsoon rains about a month before their normal date.

(5) The general deficiency of the monsoon rainfall in Northern and Central India and the excess in the centre and south of the Peninsula. The inverse relation between the character of the rainfall in Northern India and the Peninsula holds in about five years out of six.

The information at present available for discussing the meteorology of the South-East trades region of the Indian Ocean is very limited.

The following gives variation data of the Royal Alfred observatory, Mauritius, deduced from a comparison of the means of 1895 with normal means based on the observations of the previous 21 years:—

Month.	Variation from normal of				Percentage variation of wind velocity.
	Pressure.	Rainfall.	Percentage variation of rainfall.	Hourly wind velocity.	
	"	Inches.			
January 1895	—·079	—5·11	— 70	+1·3	+11·4
February ,,	—·018	—3·09	— 51	—2·1	—18·8
March ,,	—·020	+15·38	+176	+1·7	+17·0
April ,,	—·044	—3·18	— 55	—2·3	—21·9
May ,,	+·013	—0·91	— 23	+3·0	+30·0
June ,,	—·012	+0·81	+ 40	+1·4	+12·3
July ,,	—·012	—1·20	— 52	—1·8	—15·3
August ,,	—·041	+2·38	+104	+0·8	+6·5
September ,,	—·013	—0·60	— 42	—1·3	—10·8

The preceding data show that throughout the whole season there was a persistent deficiency of pressure. The rainfall of the period, January to September, was in considerable defect in five months and in remarkable excess in two months (March and August).

In the following table a similar comparison is given for Zanzibar, the normal means being deduced from the observations of 5 years:—

Month.	Variation from normal of				Percentage variation of wind velocity.
	Pressure	Rainfall.	Percentage variation of rainfall.	Hourly wind velocity in miles.	
	"	Inches.			
January 1895	0	—2·15	— 93	+0·9	+11·1
February ,,	+·004	—3·80	— 91	—0·7	—10·3
March ,,	—·026	+0·35	+ 7	—1·3	—20·6
April ,,	—·001	—7·00	— 55	—1·1	—16·9
May ,,	+·005	—0·55	— 7	—0·4	— 5·3
June ,,	+·029	—1·07	— 90	+0·1	+ 1·2
July ,,	+·002	—0·48	— 22	—1·3	—16·3
August ,,	—·033	—1·28	— 67	0	0
September ,,	+·021	+3·93	+295	+0·2	+ 4·1

The preceding data indicate that the meteorology of Zanzibar in 1895 was characterized by unusual lightness of the winds, and by steady and remarkable deficiency of rainfall. In both of these respects it resembled Mauritius, the only difference being that the abnormal features were more pronounced at Zanzibar than at Mauritius.

The Port Victoria (Seychelles) observatory was established in 1894. The following gives a comparison between the means of the first nine months of the two years, *viz.*: —1894 and 1895, at the Seychelles, Zanzibar and Mauritius:—

Month.	Difference of pressure between the corresponding months of the years 1894 and 1895 (*i.e.*, 1894 *minus* 1895) at		
	Port Victoria (Seychelles).	Zanzibar.	Mauritius.
	"	"	"
January	?	0	+·005
February	?	+·001	—·056
March	+·017	+·032	+ 004
April	—·002	0	+·028
May	+ 003	—·003	—·034
June	+·016	—·012	—·002
July	—·040	—·032	—·026
August	—·005	+·002	+·026
September	—·023	—·035	—·024

In the following table the pressure differences are given in another and more useful manner:—

Month.	Pressure Differences.					
	Mauritius *minus* Zanzibar.		Difference 1894 *minus* 1895.	Mauritius *minus* Seychelles.		Difference 1894 *minus* 1895.
	1894.	1895.		1894.	1895.	
	"	"	"	"	"	"
March	+·037	+·065	—·028	+·050	+·063	—·013
April	+·063	+·035	+·028	+·102	+·072	+·030
May	+·044	+·075	—·031	+·142	+·179	—·037
June	+·051	+·041	+·010	+·209	+·227	—·018
July	+·070	+·064	+·006	+·218	+·204	+·014
August	+·113	+·089	+·024	+·245	+·214	+·031
September	+·112	+·101	+·011	+·202	+·203	—·001

The preceding data establish that the pressure differences or total gradient between Mauritius and the Equatorial belt as represented by either Zanzibar or Seychelles were considerably greater in the south-west monsoon of 1894 than in that of 1895.

In the following table is given a comparison of the velocity of the air movement during the year at these three stations:—

Month.	1894.			1895.					
	Port Victoria (Seychelles.)	Zanzibar.	Mauritius.	Port Victoria (Seychelles.)		Zanzibar.		Mauritius.	
	Mean hourly velocity.	Mean hourly velocity.	Mean hourly velocity.	Mean hourly velocity.	Percentage variation.	Mean hourly velocity.	Percentage variation.	Mean hourly velocity.	Percentage variation.
	Miles.	Miles.	Miles.	Miles.		Miles.		Miles.	
January	?	10·2	13·5	6·3	+ 1·6	9·0	+11·1	12·7	+11·4
February	?	9·2	13·3	6·0	+ 1·7	6·1	−10·3	9·1	−18·8
March	5·4	6·0	10·7	4·9	— 5·8	5·0	−20·6	11·7	+17·0
April	5·0	9·3	11·0	4·3	— 8·5	5·4	−16·9	8·2	−21·9
May	8·2	9·0	7·9	5·0	−24·2	7·1	— 5·3	13·0	+30·0
June	12·5	11·0	9·6	12·0	— 2·4	8·4	+ 1·2	12·8	+12·3
July	12·1	10·9	11 1	11·6	— 2·5	6·7	−16·3	10·0	−15·3
August	11·8	7·7	13·4	13·7	+ 7 0	6·4	0	13·1	+ 6·5
September	11·5	7·7	11·1	12·4	+ 3·3	5·1	+ 4·1	10·7	−10·8
October	6·5	6·2	10 5	10·0	+20·5	4·1	— 8·9	9 8	−13·3
November	4·5	5·2	11·2	5·6	+ 9·8	3·9	— 9·3	10·1	— 7·3
December	6·2	8·9	12·0	5 9	— 3·3	6·3	+ 8·6	11·8	+ 8·3

The preceding data have indicated that the air movement at the Seychelles in the month of May 1895 was much less than in May 1894 and was probably largely below the normal. This is shown even more clearly by the following comparison, week by week, from the 1st of May to the end of June of the air pressure and the velocity of the air movement at Port Victoria, Seychelles, in the two years 1894 and 1895:—

Weekly means of pressure and wind velocity at Port Victoria (Seychelles.)

Week.	1894.		1895.	
	10 A.M. Pressure reduced to Sea level and constant gravity.	Hourly wind velocity in miles.	10 A.M. Pressure reduced to Sea level and constant gravity.	Hourly wind velocity in miles.
	"		"	
1st to 7th May	29·926	4·1	29·899	5·9
8th ,, 14th ,,	·922	9·1	·912	3·6
15th ,, 21st ,,	·926	8·1	·899	3·7
22nd ,, 28th ,,	·887	9·9	·925	6·4
29th ,, 4th June	·905	10·9	·895	9·9
5th ,, 11th ,,	·917	11·4	·863	12·9
12th ,, 18th ,,	·927	13·4	·886	11·6
19th ,, 25th ,,	·932	11·7	·976	10·4

The previous data are interesting in many respects.

In the first place the wind data of the Seychelles show that there is a remarkable change in the strength or velocity of the winds in the last fortnight of May or the beginning of June. Previously to this change (which usually occurs in May), the mean velocity is barely 5 miles per hour and during the next four months it is 12 miles per hour as measured by the observatory anemometer. In the second place the data show that the change commenced considerably earlier in May 1894 than in May 1895. The increased velocity in the second week of May 1894 (as is fully shown by an examination of the daily data) was solely due to the early advance of the south-east trades towards and across the equator.

The change in the strength of the winds from an average of 5 to nearly 10 miles per hour occurred in the second week of May in the year 1894, whereas it was delayed until the first week of June in the year 1895, and hence occurred three weeks later than in the preceding year.

The hot weather conditions of pressure and temperature were as strongly marked in May 1895 as in May 1894, and the delay in the strengthening of the winds at the

Seychelles immediately antecedent to the monsoon was hence not due to conditions to the north, in either the India land or sea areas.

This point is of great importance as it proves fully that the delay in the establishment of the monsoon in India in June 1895 was due to conditions outside of India, but present in the Indian Ocean.

Also the comparison of the mean monthly pressures at Mauritius, Zanzibar and Seychelles establishes the following facts :—

(1) Pressure was more or less below the normal at all these stations in 1895, but the deficiency was on the whole greatest at Mauritius. This abnormal feature was as strongly marked before the advent of the monsoon rains in India as during their prevalence from June to September.

(2) In consequence of these variations of the pressure from the normal, the pressure differences over the permanent South Trades area (as measured by the differences of pressure between Mauritius and Zanzibar or the Seychelles) were less than usual, and the differences were large in amount and importance. Thus in June, July and August the pressure differences between Mauritius and the Seychelles were approximately ·05″ less than the normal. As the normal difference of pressure is barely ·25″, the gradients were 20 per cent. less than usual in these three months in 1895.

These facts hence indicate that the South East trade winds were very probably lighter than usual in 1895 and hence that the volume and mass of the air movement across the Equator giving rise to the south-west monsoon winds in India were probably considerably less than usual.

It would be very interesting to be able to assign some adequate physical cause or explanation for this large difference between the strength of the South East Trades (and hence also of the south-west monsoon rainfall) in the years 1894 and 1895.

The meteorological reports for the year 1895 of the Australian Continent have not yet reached me. The only information I have as yet received which throws some light upon the abnormal conditions in the Indian Ocean is from the logs of two or three ships which I have received giving accounts of unusually foggy cold weather experienced to the south-east of the Cape of Good Hope and in the extreme south of the Indian Ocean. It is possible this may have been due to unusual cold in the Antarctic region, and that the area of high pressure in the centre of the Indian Ocean may have been displaced considerably to the south, thus reducing the pressure gradients over the large area of the Indian Ocean to the north.

The relative distribution of pressure established over India during the hot weather probably accounts for several features in the distribution of the rainfall of this period as explained in previous Annual Summaries. The dominant factor determining the rainfall distribution of the season was however not the local conditions in India, but the general weakness of the suth-west monsoon currents, the causes of which have been explained above, so far as is at prescnt possible.

IV. The retreating south-west monsoon period. —The following gives mean variation data of this period for eleven meteorological Provinces :—

Meteorological Province.	Variation from normal during the period October to December 1895 of						
	Mean pressure.	Mean axi mu m temperature.	Mean minimum temperature.	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud.	Average actual rainfall.
	″	°	°	″			Inches.
Burma Coast and Bay Islands.	+·013	+0·4	+0·4	−·003	−2	+0·3	−6·51
Burma Inland . . .	+·020	−1·5	+0·2	?	?	?	−0·65
Assam	+·015	−0·1	−1·2	−·024	−1	−0·7	−0·77
Bengal and Orissa .	+·008	+0·4	−0·6	−·031	−4	0	−1·51
Gangetic Plain and Chota-Nagpur.	+·010	+1·4	−0·3	−·024	−6	−0·3	−2 17
Upper Sub-Himalayas .	+·003	+1·6	+1·3	−·030	−5	+0·2	−0·84
Indus Valley and North-West Rajputana.	+·004	+1·8	+1·9	−·003	−3	+0·6	−0·27
East Rajputana, Central India and Gujarat.	+·011	+2·3	+1·4	−·018	−3	0	−0·54
Deccan	+·021	+2·0	+0·4	−·030	−4	−0·4	−1·80
West Coast . . .	+·008	+1·4	+0·6	−·020	−6	+0·5	−1·40
South India . . .	+·016	+0·3	−0·1	−·010	−1	+0·3	+0·37

The preceding data indicate that the chief abnormal features of the meteorological conditions of the period were as follows :—

(1) The mean air pressure over the whole of India was above the normal for all divisions. The excess was most marked in two areas, the first, including the Deccan (+·021″) and South India (+·016″), and the second, Burma Inland (+·020″), Assam (+·015″) and Burma Coast (+·013″).

(2) The maximum or day temperature of the period was in excess in all divisions except Assam and Burma Inland. The excess was largest in Central India and East Rajputana (+2°·3) and the Deccan (+2°·0). The minimum temperature was slightly below the normal in Assam Bengal, Orissa, and the Gangetic Plain and South India. The excess was greatest in East Rajputana, Central India, the Indus Valley and North Rajputana. The mean temperature of the period was above the normal except in Assam and Burma Inland (0°·7 in defect). It was most largely in excess in the Indus Valley, Rajputana and Central India (+1°·9), the Upper Sub-Himalayan range (+1°·5) and the Deccan (+1°·2).

(3) The mean relative and absolute humidities were more

or less below the normal in all districts. The mean relative humidity of the period was most largely below the normal in the West Coast districts (—6), the Gangetic Plain and Chota-Nagpur (—6) and Upper Sub-Himalayas (—5).

(4) The rainfall of the period was in defect in all areas except South India where it was normal. The deficiency was large in the following areas, on which it exceeded 20 per cent:—

Meteorological Province or area.	Rainfall. Average actual, October to December 1895.	Variation from normal during period.	Percentage variation from normal during period.
	Inches.	Inches.	
Burma Coast and Bay Islands	7·96	−6·51	−44
Bengal and Orissa	5·23	−1·51	−25
Gangetic Plain and Chota-Nagpur	0·90	−2·17	−71
Upper Sub-Himalayas	0·17	−0·84	−76
Indus Valley and North-West Rajputana.	0·13	−0·27	−69
East Rajputana, Central India and Gujarat.	0·88	−0·54	−51
Deccan	3·04	−1·80	−42

The following gives variation data of ten meteorological provinces for the period November and December 1895 for comparison with the data of the corresponding table on page 659 of the 1894 Annual Summary:—

Meteorological Province.	Variation from normal during the period November and December 1895 of: Mean pressure.	Mean maximum temperature.	Mean minimum temperature.	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud.	Average actual rainfall.
	"			"			Inches.
Burma Coast and Bay Islands.	+·017	+0·2	+0·2	−·015	−2	+0·6	−2·27
Assam	+·013	+0·7	−0·4	−·002	−1	−0·6	+0·10
Bengal and Orissa	+·010	+1·0	+0·1	−·010	−4	+0·3	−0·52
Gangetic Plain and Chota-Nagpur.	+·010	+1·9	+0·8	+·001	−5	−0·3	−0·26
Upper Sub-Himalayas	+·008	+2·0	+2·5	−·002	−3	+0·4	−0·51
Indus Valley and North-West Rajputana.	+·009	+2·2	+3·2	+·030	−1	+0·7	−0·26
East Rajputana, Central India and Gujarat.	+·016	+3·0	+2·8	+·018	−1	0	−0·29
Deccan	+·026	+2·7	+0·8	−·021	−4	−0·8	−1·04
West Coast	+·021	+1·6	+0·5	−·031	−7	+0·1	−1·52
South India	+·022	+1·0	−0·3	−·024	−4	+0·1	−1·63

The preceding data indicate that in this period, as for the longer period, October to December, pressure was above the normal, the excess being greatest in the Peninsula. The mean maximum temperature was in slight to considerable excess, the mean minimum above the normal in all divisions except Assam and South India, the amount of aqueous vapour and relative humidity deficient, the variation of the cloud amount somewhat irregular, but the rainfall below the normal in all divisions except Assam. The defect was large absolutely and relatively to the normal over the greater part of Burma, North-Eastern India and the peninsula.

The following gives comparative rainfall data for the period including the months of October and November in Northern and Central India and the Deccan:—

Meteorological Province or area.	Rainfall. Average actual, October and November 1895.	Variation from normal during period, October and November 1895.	Percentage variation from normal during period, October and November 1895.
	Inches.	Inches.	
Burma Coast and Bay Islands	6·50	−7·05	−52
Burma Inland	4·07	−3·13	−42
Assam	4·27	−1·10	−20
Bengal and Orissa	4·66	−1·70	−29
Gangetic Plain and Chota-Nagpur	0·74	−2·09	−74
Upper Sub-Himalayas	0·11	−0·44	−68
Indus Valley and North-West Rajputana.	0·11	−0·12	−55
East Rajputana, Central India and Gujarat.	0·80	−0·47	−53
Deccan	2·99	−1·34	−35

The larger features of the meteorology of the period were very marked and were chiefly due to the early withdrawal of the monsoon currents from Northern India.

The monsoon currents, as already pointed out, withdrew from Upper India at the end of August, a month earlier than usual. The tracks of the largest and most important cyclonic storms of September were further south and east than usual and agreed with the normal tracks of the month of October rather than with those of September. This was specially the case with the severe storm of the first week of the month of September which advanced across the Circars Coast into the Deccan, along a track common in October, but very exceptional in September.

The retreating south-west monsoon rains began considerably earlier than usual in the Madras coast districts, and at the commencement of October. The coast districts and South Deccan received heavier rain than usual at the expense of North-Eastern India where the rainfall was very deficient. November was an exceptionally dry month over the whole area. The rainfall of December was chiefly due to two cyclonic storms or disturbances of exceptional character. The first advanced northwards up the Bay between the two areas of largely increased pressure in Burma and in the Peninsula. The second disturbance occurred in the last week of the month and originated in the extreme south of the Bay as a belt of squally rainy weather with

westerly winds to the south and easterly winds to the north. There was no marked depression or regular cyclonic circulation in the disturbance. Vessels passing through the belt had severe squalls and strong winds and the weather and winds were hence very similar to those experienced in passing through a regular cyclonic storm. It is possible that the westerly gales and stormy winds, which have been occasionally reported in this part of the Bay and assumed to have been due to cyclones or cyclonic storms, may have been really produced by similar conditions to those of the disturbance of the last week of December.

The following table gives the pressure anomalies of the eleven meteorological provinces of India for the months of September, October, November and December. It illustrates the more important abnormal pressure conditions of the period :—

Meteorological Province.	Pressure anomaly.					
	September.	October.	November.	December.	Mean of October to December.	Mean of Nov. and December.
	"	"	"	"	"	"
Burma Coast and Bay Islands	−·024	+·003	+·022	−·019	+·002	+·002
Burma Inland	−·017	−·005	+·022	+·010	+·009	+·016
Assam	−·006	+·017	+·002	−·007	+·004	−·003
Bengal and Orissa	−·002	+·003	−·001	−·010	−·003	−·006
Gangetic Plain and Chota-Nagpur.	+·006	+·009	−·012	0	−·001	−·006
Upper Sub-Himalayas	+·002	−·008	−·019	+·004	−·008	−·008
Indus Valley and North-West Rajputana.	+·012	−·007	−·023	+·009	−·007	−·007
East Rajputana, Central India and Gujarat.	+·018	−·002	−·011	+·012	0	+·001
Deccan	+·011	+·008	+·005	+·016	+·010	+·011
West Coast	−·011	−·020	+·015	−·004	−·003	+·006
South India	−·018	+·002	+·021	−·008	+·005	+·007

The data of the preceding table show a marked tendency to excessive pressure during the whole period, October to December, in Burma and (to a less extent) in the Deccan, and an equally persistent deficiency in Bengal and the Gangetic plain. It is also noteworthy that the local pressure variations or anomalies were generally opposite in character to those of the succeeding months in September and hence that the conditions which obtained in October and the following months were due to conditions and actions initiated in September, and were very probably a local result of the early withdrawal of the monsoon currents from North-West India.

The abnormal conditions established in Burma and Assam were apparently the extension of conditions in the large plateau area to the north. Similar conditions prevailed in the corresponding periods of 1892, 1893 and 1894. The following gives a comparison of the antecedent conditions in Burma and Assam during the four years 1892 to 1895,—

Assam.

Variation from normal of	1892.			1893.			1894.			1895.		
	August.	September.	October.	August.	September.	October.	August.	September.	October.	August.	September.	October.
Mean monthly pressure	+·031	−·029	−·021	+·010	−·012	−·005	−·016	+·001	−·046	−·014	+·011	+·019
Mean daily temperature	−1·2	+1·1	−0·6	−1·0	−0·5	−0·4	−1·0	−1·6	−0·1	−0·6	−0·2	−2·3
Mean humidity	+2	−2	0	+2	−2	+2	+1	+3	+5	+1	0	−2
Mean cloud	+0·5	−0·2	−0·5	+0·1	−0·6	+0·2	+0·6	+1·0	+1·4	0	−0·5	−0·9
Average actual rainfall	+7·76	−1·42	+2·19	+3·49	−5·85	+1·97	+2·50	+7·17	+6·36	+0·70	+7·94	−0·87

Burma.

Variation from normal of	1892.			1893.			1894.			1895.		
	August.	September.	October.	August.	September.	October.	August.	September.	October.	August.	September.	October.
Mean monthly pressure	+·021	−·016	−·011	−·014	−·023	−·012	−·025	−·015	0	−·026	−·007	+·005
Mean daily temperature	+0·3	−0·5	−0·4	+0·4	−0·6	−1·2	+0·1	+0·5	−0·3	+0·2	+1·0	+0·8
Mean humidity	−3	−1	−1	−1	+1	+1	+1	+1	0	0	0	−1
Mean cloud	+0·2	+0·8	−0·2	+0·6	+1·1	+1·3	+0·6	+0·9	+0·4	+1·0	+0·6	−0·6
Average actual rainfall	−6·43	+0·81	+0·26	−0·47	+2·09	+3·20	+0·90	−0·12	−1·50	+2·71	−2·02	−3·58

The following tables give a comparison of the same elements of observation for the months of November and December of the four years, 1892 to 1895 :—

ASSAM.

VARIATION FROM NORMAL OF	1892.		1893.		1894.		1895.	
	November.	December.	November.	December.	November.	December.	November.	December.
Mean monthly pressure	—·039	+·030	+·068	+·065	+·044	+·004	+·035	—·009
Mean daily temperature	—0·7	—0·5	0	—2·4	—0·5	—0·1	+0·7	—0·4
Mean humidity	—1	0	+2	—3	+3	+2	0	—
Mean cloud	—0·8	—0·2	+0·1	—2·0	0	0	+0·5	—0·5
Average actual rainfall	+1·29	—0·19	—0·40	—0·43	+2·42	+0·08	—0·23	+·033

BURMA.

VARIATION FROM NORMAL OF	1892.		1893.		1894.		1895.	
	November.	December.	November.	December.	November.	December.	November.	December.
Mean monthly pressure	—·035	+·045	+·058	+·040	+·055	+·013	+·055	—·021
Mean daily temperature	0	—2·4	—0·9	—3·5	—1·0	—0·2	—1·2	+1·5
Mean humidity	0	—5	—2	—6	—5	—4	—5	0
Mean cloud	+0·4	—0·7	—1·1	—1·0	—0·7	0	—1·2	+1·8
Average actual rainfall	—1·60	—0·36	—2·68	—0·31	—2·14	—0·15	—2·25	+0·79

The data for Burma show that in November 1895, as in the corresponding months of 1893 and 1894, pressure was in large relative excess, temperature below the normal, the air considerably drier than usual and skies unusually free from cloud. In each of these years the rains terminated considerably earlier than usual in Burma and dry north-east winds extended over the Bay in November, displacing the humid winds of the retreating south-west monsoon. The relations of these changes were fully discussed in the Annual Summary for the year 1893, pages 583-587 and for the year 1894, pages 656-660 and it is hence unnecessary to repeat them.

The year.—The following gives a tabular summary of the meteorological data of the year 1895 for the eleven meteorological provinces of India :—

Mean provincial meteorological data for the year 1895.

PROVINCE.	Bar. variation.	Mean maximum of year.	Variation of year.	Mean minimum of year.	Variation of year.	Mean daily temperature of year.	Variation of year.	Mean daily range.	Absolute range, during year.	Mean monthly absolute range.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.*
	″	°	°	°	°	°	°	°	°	°	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	—·004	87·9	+0·2	73·2	+0·6	80·6	+0·4	14·8	38·5	22·9	125·96	131·47	—11·41
Burma Inland	—·001	86·8	—1·2	66·1	+0·4	76·6	—0·5	20·8	57·3	31·9	51·07	53·07	+ 1·49
Assam	+·004	83·7	0	67·0	—0·1	75·4	0	16·6	51·4	27·8	115·88	103·84	+12·04
Bengal and Orissa	+·007	86·4	+0·2	69·3	—0·1	77·9	+0·1	17·1	56·5	28·7	61·19	70·19	—1195
Gangetic Plain and Chota-Nagpur.	+·007	87·8	—0·2	66·8	+0·2	77·3	0	20·9	67·7	34·5	41·35	45·50	— 3·61
Upper Sub-Himalayas	+·006	86·9	0	63·3	+1·0	75·0	+0·5	23·4	76·6	38·7	36·37	40·05	— 3·68

Mean provincial meteorological data for the year 1895—concluded.

Province.	Bar. variation.	Mean maximum of year.	Variation of year.	Mean minimum of year.	Variation of year.	Mean daily temperature of year.	Variation of year.	Mean daily range.	Absolute range, during year.	Mean monthly absolute range.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.*
	"	°	°	°	°	°	°	°	°	°	Inches.	Inches.	Inches.
Indus Valley and North-West Rajputana.	+·001	92·0	+1·4	65·1	+0·9	78·8	+1·1	26·6	82·7	43·3	11·74	10·38	+ 0·31
East Rajputana, Central India and Gujarat.	+·008	90·6	+0·7	67·1	+0·7	78·9	+0·7	23·5	71·0	37·7	24·99	32·36	− 7·32
Deccan	+·010	90·3	+0·4	67·7	+0·6	79·0	+0·5	22·6	65·5	34·8	38·47	43·88	− 4·36
West Coast . . .	+·003	86·3	+0·7	74·8	+0·8	80·6	+0·7	11·6	31·4	19·1	89·22	104·55	−15·18
South India . . .	+·006	89·3	0	71·7	0	80 5	0	17·5	48·5	27·9	43·81	43·80	+ 1·85
Mean of whole India from Table I.	+·004	88·0	+0·2	68·4	+0·5	78·2	+0·3	19·6	58·8	31·6	58·19	61·74	− 3·80
Mean of whole India from Table II.	+·003	88·0	+0·2	68·6	+0·7	77·3	+0·4	19·4	59·4	...	...	...	...

* A reference to Table I will show that the means in the figure columns 12 and 13 are derived from a smaller number of stations than the means in the eleventh column. The sum of the figures in columns 12 and 13 therefore will not agree with the figures in column 11.

The mean 8 A. M. pressure of the year was in slight excess over the whole of India by amounts averaging ·004". The excess was greatest in the Deccan, Central India, Gujarat and Rajputana in which it averaged ·009". The mean maximum temperature was normal or in slight excess in all provinces except Burma Inland where it averaged 1°·2 below the normal. The excess was greatest in the Indus Valley and North-West Rajputana in which it was 1°·4. The mean night or minimum temperature was normal or in slight excess. The excess was most marked in the Upper Sub-Himalayas (+1°·0) and Indus Valley and North-West Rajputana (+0°·9). The mean temperature of the whole Indian land area was according to the data of Table I, 0°·3 above the normal and according to those of Table II, 0°·4 in excess. The variations for the year were less than ½° in five divisons. The mean temperature of the year was 1°·1 in excess over the Indus Valley and North-West Rajputana, 0°·7 in the West Coast, Central India and East Rajputana and 0°·5 in the Upper Sub-Himalayas and the Deccan and 0°·5 in defect in Burma Inland. The year was slightly more cloudy but drier than the normal. The most noteworthy feature of the year was the deficient rainfall. The mean rainfall for the whole of India and Burma was in defect in the first three divisions of the year, and the deficiency for the whole year (taking into consideration the areas represented by the rainfall stations) was 3·38 inches or 7 per cent. The rainfall of the year was more or less considerably in defect over the whole Indian area except Burma Inland, Assam, the Indus Valley and North-West Rajputana and South India. It was 12 per cent. above the normal in Assam and less than 4 per cent. in the remaining divisions, and hence was practically normal in these meteorological provinces. It was between 20 and 25 per cent. below the normal in Central India and East Rajputana. It was normal or in slight excess in Southern India.

Table

Abstract of Observations taken at 8 A.M. at 203

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.							Temperature of Air.										
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
I.—Burma Coast and Bay Islands.		...	...	−·004	...	...	...	...	...	...	87·9	+0·2	73·2	+0·6	80·6	+0·4	14·8	...	...	38·5	22·9
Bay Islands	Port Blair	61	29·848	?	29·840	29·986	29·618	·368	·167	81·0	87·1	?	77·5	?	82·3	?	9·6	94·8	70·6	24·2	16·3
Tenasserim	Mergui	96	29·855	?	29·884	29·999	29·671	·328	·180	79·1	87·7	?	72·7	?	80·2	?	15·0	97·9	64·3	33·6	22·8
	Tavoy	26	29·932	?	29·889	30·084	29·720	·364	·166	76·4	88·4	?	71·0	?	79·7	?	17·4	98·7	57·7	41·0	25·5
	Moulmein	94	29·836	+·001	29·868	30·036	29·569	·467	·202	76·7	88·8	+0·8	72·8	+0·7	80·8	+0·8	16·0	98·9	60·4	38·5	25·4
	Toungoo	183	29·714	−·006	29·842	29·955	29·384	·571	·220	74·7	90·0	0	70·8	+0·6	80·4	+0·3	19·2	105·7	53·1	52·6	28·4
Lower Burma	Rangoon	41	29·868	−·007	29·846	30·069	29·548	·521	·211	76·1	90·0	+0·7	72·9	+0·2	81·5	+0·5	17·1	103·1	59·8	43·3	24·7
	Bassein	27	29·881	−·002	29·844	30·087	29·561	·526	·213	76·6	88·5	+0·6	72·3	+0·5	80·4	+0·6	16·2	102·7	55·0	47·7	24·7
	Diamond Island	41	29·863	−·008	29·839	30·050	29·539	·511	·200	80·2	84·9	−0·7	77·1	+2·3	81·0	+0·8	7·8	90·6	70·4	20·2	14·1
Arakan	Akyab	20	29·873	−·002	29·836	30·104	29·554	·550	·247	75·6	86·0	−0·2	71·5	−0·6	78·8	−0·4	14·5	96·1	50·7	45·4	23·9
II.—Burma Inland.		...	...	−·001	...	...	...	...	...	...	86·8	−1·2	66·1	+0·4	76·6	−0·5	20·8	...	...	57·3	31·9
Central Burma	Thayetmyo	134	29·762	−·001	29·839	30·018	29·445	·573	·224	76·4	91·2	−0·5	70·0	+0·4	80·6	−0·1	21·2	108·1	46·2	61·9	31·4
	Minbu	?	29·733	?	?	30·031	29·401	·630	·245	75·8	90·8	?	70·8	?	80·8	?	20·0	107·6	47·0	60·6	30·9
	Yamethin	645	29·250	?	?	29·509	28·928	·581	·228	74·4	91·3	?	69·8	?	81·6	?	22·4	110·2	50·1	60·1	33·3
	Taunggyi	?	?	?	?	?	?	?	?	62·7	76·9	?	55·7	?	66·3	?	21·2	89·1	35·6	53·5	32·0
Upper Burma	Mandalay	249	29·635	...	?	29·926	29·339	·587	·241	76·6	91·3	?	70·9	?	81·1	?	20·4	107·1	51·7	55·4	31·3
	Kindat	?	29·527	?	?	29·852	29·235	·617	·267	70·4	85·3	−1·8	67·0	+0·3	76·2	−0·8	18·3	99·8	44·5	55·3	29·1
	Lashio	?	27·121	?	?	27·364	26·891	·473	·203	65·6	81·4	?	59·7	?	70·6	?	21·7	93·5	40·1	53·4	33·6
	Bhamo	?	29·517	?	?	29·836	29·229	·607	·248	70·0	86·3	?	64·8	?	75·6	?	21·5	99·6	41·4	58·2	33·8
III.—Assam.		...	...	+·004	...	...	...	...	...	...	83·7	0	67·0	−0·1	75·4	0	16·6	...	...	51·4	27·8
Assam (Surma)	Silchar	104	29·794	+·004	29·852	30·062	29·450	·612	·276	72·0	86·4	+0·6	67·2	−0·2	76·8	+0·2	19·2	99·6	45·5	54·1	30·9
Brahmaputra	Sibsagar	333	29·567	−·001	29·866	29·890	29·225	·665	·290	69·4	81·5	−0·6	65·7	−0·2	73·6	−0·4	15·8	96·7	41·9	54·8	27·5
	Dhubri	115	29·763	+·008	29·836	30·068	29·407	·661	·283	71·6	83·1	+0·1	68·2	0	75·7	+0·1	14·9	95·2	49·8	45·4	25·0
IV.—Bengal and Orissa.		...	...	+·007	...	...	...	...	...	...	86·4	+0·2	69·3	−0·1	77·9	+0·1	17·1	...	...	56·5	28·7
East Bengal	Chittagong	87	29·790	−·006	29·827	30·039	29·438	·601	·286	74·0	85·3	+0·9	68·7	−0·8	77·0	+0·1	16·6	95·7	49·1	46·6	26·3
	Lungleh	?	?	?	?	?	?	?	?	65·5	73·2	?	61·1	?	67·2	?	12·1	83·8	40·2	43·6	23·8
	Noakhali	43	29·831	?	29·822	30·090	29·322	·768	·292	75·0	84·4	?	68·3	?	76·4	?	16·1	94·7	45·7	49·0	26·6
	Comilla	36	29·840	?	29·824	30·100	29·393	·707	·290	74·7	86·2	?	68·0	?	77·1	?	18·2	97·3	46·1	51·2	28·5
	Sirajganj	49	29·813	?	29·813	30·111	29·426	·685	·288	72·8	85·3	?	68·0	?	76·7	?	17·3	59·8	45·2	54·6	28·7
	Narayanganj	26	29·841	+·003	29·816	30·113	29·290	·823	·306	75·1	85·9	−0·7	70·5	+0·1	78·2	−0·3	15·4	96·6	49·2	47·4	26·1
	Barisal	13	29·856	+·007	29·814	30·129	28·911	1·218	·335	76·1	86·1	+0·8	70·1	0	78·1	+0·4	16·0	95·8	49·0	46·8	26·6
	Mymensingh	59	29·813	+·004	29·825	30·089	29·465	·624	·279	72·9	84·6	+0·3	68·1	+0·2	76·4	+0·3	16·5	96·2	45·5	50·7	27·7
Deltaic Bengal	Faridpur	46	29·829	?	29·824	30·118	29·300	·818	·306	74·8	85·3	?	68·9	?	77·1	?	16·4	98·3	47·5	50·8	27·5
	Jessore	33	29·827	+·002	29·807	30·128	29·392	·736	·303	75·5	87·6	−0·3	68·9	−1·1	78·3	−0·7	18·7	101·5	43·9	57·6	30·5
	Calcutta	21	29·838	+·005	29·805	30·147	29·347	·800	·296	75·3	86·7	+0·4	70·2	−0·2	78·5	+0·1	16·5	107·0	47·2	59·8	28·3
	Saugor Island	25	29·830	+·003	29·799	30·134	29·281	·853	·291	77·3	85·7	+0·3	73·6	0	79·7	+0·2	12·0	95·2	50·7	44·5	22·8
	Krishnagar	47	29·811	?	29·808	30·121	29·374	·747	·296	*74·7	*88·3	?	*67·2	?	*77·8	?	21·1	110·2	44·2	66·0	33·1
	Midnapore	149	29·714	?	29·812	30·022	29·227	·795	·285	76·0	90·4	?	70·2	?	80·3	?	20·2	115·4	45·1	70·3	33·0

* Mean of 11 months.

I.

Stations in India, Burma, etc., in the year 1895.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity of year.	Mean vapour tension of year.	Mean cloud amount of year.	Rainfall. Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.	Heaviest rainfall during year.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	125·96	131·47	−11·41	...	**I.—Burma Coast and Bay Islands.**	
13	37	39	22	22	21	75	93	43	8·9	7·4	+20	84	·896	6·0	127	?	?	125·75	116·98	+ 8·77	4·55	Port Blair	Bay Islands.
...	88	24	27	21	30	42	40	90	1·7	1·8	− 6	85	·845	4·5	144	?	?	159·13	163·10	− 3·97	4·54	(Mergui(a)	Tenasserim.
293	10	8	...	1	5	70	3	24	1·5	?	?	87	·799	3·5	137	?	?	173·18	?	?	6·98	Tavoy.	
...	10	56	93	77	43	43	26	22	2·8	2·8	0	86	·791	5·8	133	137·55	− 4·55	168·66	181·34	− 12·68	6·21	Moulmein.	
72	66	11	14	112	50	6	2	32	2·8	3·1	−10	86	·776	4·8	100	113·72	−13·72	65·93	79·77	−13·84	3·00	Toungoo.	
...	36	44	19	17	52	100	77	20	4·2	4·6	− 9	88	·803	5·1	113	119·16	− 6·16	93·81	95·27	− 1·46	4·99	Rangoon	Lower Burma.
71	13	45	22	35	54	30	31	63	5·1	3·7	+38	87	·814	4·5	125	130·36	− 5·36	92·20	109·55	−17·35	3·21	Bassein.	
9	56	81	19	8	19	87	28	58	11·1	7·4	+50	79	·813	5·8	106	118·44	−12·44	101·44	118·66	−17·22	5·56	Diamond Island.	
1	123	97	55	22	50	9	1	7	3·8	3·2	+19	88	·804	5·4	115	119·91	− 4·91	153·54	187·08	−33·54	6·64	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	51·07	53·07	+1·49	...	**II.—Burma Inland**	
...	58	30	18	52	126	27	25	29	5·0	5·1	− 2	75	·696	4·1	76	76·08	− 0·08	34·28	37·67	− 3·39	2·62	Thayetmyo	Central Burma.
41	23	5	17	125	34	6	26	88	7·7	?	?	75	·691	3·4	53	?	?	39·93	?	?	3·05	Minbu.	
52	48	10	3	140	74	2	3	33	5·5	?	?	79	·683	2·1	57	?	?	34·05	?	?	2·20	Yamethin.	
133	...	10	2	113	27	75	...	3	?	?	?	80	·473	5·0	105	?	?	58·33	?	?	2·37	Taunggyi.	
62	48	11	10	60	90	62	5	17	6·0	?	?	74	·687	4·0	50	?	?	43·55	?	?	4·70	Mandalay	Upper Burma.
296	15	1	2	10	9	13	6	13	1·3	?	?	91	·709	5·3	88	?	?	74·84	68·47	+ 6·37	3·25	Kindat.	
...	...	...	...	...	...	...	...	...	?	?	?	86	·559	5·4	90	?	?	55·10	?	?	2·57	Lashio.	
213	20	70	2	9	7	16	7	21	1·9	?	?	88	·677	4·4	108	?	?	68·44	?	?	2·95	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	115·88	103·84	+12·04	...	**III.—Assam.**	
338	3	3	8	7	3	2	1	...	1·6	2·7	−41	88	·713	6·1	132	135·79	− 3·79	117·60	126·46	− 8·86	5·00	Silchar	Assam (Surma)
139	5	119	22	27	9	34	8	2	3·2	2·4	+33	95	·711	5·4	116	126·18	−10·18	114·21	92·61	+21·60	7·46	Sibsagar	Brahmaputra.
41	38	131	75	20	8	35	12	5	4·9	4·7	+ 4	87	·704	4·8	85	87·39	− 2·39	115·84	92·46	+23·38	11·11	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	61·19	70·19	−11·95	...	**IV.—Bengal and Orissa.**	
7	49	117	54	90	33	6	3	6	4·9	5·1	− 4	87	·750	4·9	79	96·01	−17·01	91·21	95·09	− 3·88	6·98	Chittagong	East Bengal.
...	...	...	...	...	...	...	...	...	?	?	?	82	·533	?	138	?	?	135·04	?	?	7·12	Lungleh.	
...	56	86	59	64	33	37	10	20	4·1	?	?	87	·779	3·5	100	108·60	− 8·60	93·40	121·57	−28·17	4·43	Noakhali.	
100	34	5	73	29	109	10	3	2	3·7	?	?	92	·813	4·4	81	101·66	−20·66	71·98	91·63	−19·65	4·34	Comilla.	
207	15	4	32	29	29	11	5	5	1·6	?	?	86	·727	4·8	75	76·30	− 1·30	48·17	61·16	−12·99	2·23	Sirajganj.(b)	
57	32	33	44	73	49	29	18	29	5·2	4·5	+16	86	·773	5·6	72	89·49	−17·49	51·12	70·11	−18·99	3·14	Narayanganj.	
221	17	21	11	22	46	18	...	9	2·9	?	?	85	·799	5·1	94	102·35	− 8·35	60·06	77·78	−17·72	4·75	Barisal.	
50	30	73	91	73	23	6	6	13	3·5	?	?	87	·729	3·7	93	104·65	−11·65	79·34	84·99	− 5·65	3·93	Mymensingh.	
165	34	9	16	50	68	11	5	7	2·8	?	?	87	·784	3·8	84	88·80	− 4·80	56·51	69·11	−12·60	3·18	Faridpur	Deltaic Bengal.
114	41	9	15	52	72	27	14	21	3·1	3·2	− 3	84	·776	4·4	76	87·97	−11·97	43·36	65·03	−21·67	3·90	Jessore.	
85	38	22	36	35	52	60	19	18	3·7	4·8	−23	82	·758	4·0	72	87·19	−15·19	39·38	61·20	−21·82	1·92	Calcutta.	
1	62	67	22	13	68	72	27	33	12·4	10·8	+15	85	·824	5·8	62	86·54	−24·54	45·08	74·50	−29·42	3·10	Saugor Island.	
9	24	13	50	53	89	25	51	47	4·5	?	?	76	·681	4·4	65	74·05	− 9·05	34·84	53·86	−19·02	2·06	Krishnagar.(c)	
62	93	42	3	24	91	21	1	28	4·0	?	?	75	·714	2·4	77	76·45	+ 0·55	48·36	56·03	− 7·67	2·87	Midnapore.	

(a) Wind observations of 362 days. (b) Wind observations of 337 days. (c) Wind observations of 364 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Station

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.							Temperature of Air.										
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
Central Bengal.	Bankura	298	29·542	?	29·797	29·877	29·098	·779	·277	75·1	89·4	?	69·5	?	79·5	?	19·9	116·1	46·8	69·3	33·4
	Raniganj	334	29·524	?	29·814	29·852	29·077	·775	·287	74·2	89·3	?	69·1	?	79·2	?	20·2	115·3	46·2	69·1	33·2
	Burdwan	99	29·757	+·005	29·805	30·088	29·303	·785	·290	74·7	88·7	0	70·2	−0·3	79·5	−0·2	18·5	112·3	48·1	64·2	30·8
	Naya Dumka	489	29·362	?	29·818	29·678	29·086	·592	·286	74·6	86·3*	?	68·0	?	77·0*	?	18·7	111·9	44·7	67·2	31·6
	Berhampore	67	29·792	+·004	29·809	30·107	29·390	·717	·293	74·0	87·6	−0·2	69·4	−0·1	78·5	−0·2	18·2	110·4	47·1	63·3	30·1
	Rampur Boalia	70	29·784	?	29·804	30·098	29·383	·715	·290	75·0	86·4	?	68·8	?	77·6	?	17·6	105·1	47·1	58·0	29·5
	Malda	72	?	?	?	?	?	?	?	73·9	87·9	?	67·0	?	77·5	?	20·9	106·1	42·5	63·6	32·6
	Bogra	61	29·796	+·025†	29·811	30·086	29·428	·658	·289	73·8	86·3	+0·3	67·7	0	77·0	+0·2	18·5	99·5	44·4	55·1	29·7
North Bengal	Dinajpur	123	29·742	+·011‡	29·822	30·040	29·373	·667	·289	72·0	85·9	0	67·2	+0·4	76·5	+0·2	18·7	102·3	44·5	57·8	30·4
	Rangpur	123	29·749	?	29·829	30·047	29·379	·668	·282	72·4	85·7*	?	66·6	?	76·9*	?	17·7	94·8	42·1	52·7	26·2
	Jalpaiguri*	284	29·571	+·021‡	29·822	29·888	29·236	·652	·288	72·5	85·0	+0·4	67·5	+0·9	76·3	+0·7	17·5	95·9	43·6	52·3	28·5
Orissa	Balasore	56	29·809	+·012	29·811	30·126	29·269	·857	·290	75·7	88·3	+0·6	70·1	+0·1	79·2	+0·4	18·2	116·0	45·9	70·1	31·8
	False Point	21	29·839	+·004	29·802	30·162	29·308	·854	·301	77·6	85·9	0	71·8	−0·3	78·9	−0·2	14·1	108·5	46·9	61·6	27·4
	Cuttack	80	29·773	−·001	29·797	30·096	29·287	·809	·273	76·2	91·0	−0·4	72·6	+0·2	81·8	−0·1	18·4	115·9	50·6	65·3	31·1
	Shortt's Island	?	29·831	?	?	30·143	29·221	·922	·305	79·9	85·8	?	76·0	?	81·0	?	9·8	99·0	62·0	37·0	22·0
	Puri	20	29·846	?	29·808	30·161	29·410	·751	·264	78·0	86·3	?	74·5	?	80·4	?	11·8	99·7	51·5	48·2	22·7
V.—Gangetic Plain and Chota Nagpur.		...	...	+·007	...	...	...	...	...	...	87·8	−0·2	66·8	+0·2	77·3	0	20·9	...	...	67·7	34·5
Chota Nagpur	Hazaribagh	2,007	27·834	§+·002	29·810	28·114	27·373	·741	·261	72·0	84·5	+0·2	65·7	+0·4	75·1	+0·3	18·8	108·6	43·0	65·6	32·1
	Ranchi	2,128	27·712	?	29·808	27·975	27·235	·740	·266	71·7	84·7*	+0·2*	65·2	+0·7	75·4*	+0·5*	18·5*	106·8	44·7	62·1	32·2
	Daltonganj	730?	29·443	?	29·809	29·428	28·649	·779	·271	73·5	87·2	?	65·7	?	76·4	?	21·5	114·2	38·0	76·2	37·1
	Chaibassa	760	29·083	+·015	29·806	29·387	28·528	·859	·288	74·1	90·2	+0·3	68·4	−0·2	79·3	+0·1	21·7	115·7	44·0	71·7	35·5
Bihar (South)	Gaya	375	29·475	+·012	29·812	29·817	29·027	·790	·290	74·8	90·0	+0·1	69·0	+0·5	79·5	+0·3	21·0	113·1	45·9	67·2	34·3
	Dehri	351	29·488	?	29·800	29·832	29·027	·805	·285	75·7	89·6	?	?	?	?	?	?	113·5	?	?	?
	Patna	183	29·666	+·001	29·805	30·024	29·249	·775	·297	75·1	87·3	−0·4	68·6	+0·4	77·9	0	18·8	110·0	44·1	65·9	31·9
	Arrah	190	29·659	?	29·805	30·022	29·239	·783	·292	73·8	88·9	?	67·7	?	78·3	?	21·2	112·4	43·1	69·3	34·5
	Buxar	239	29·601	?	29·800	29·970	29·126	·844	·296	75·0	88·1	?	68·1	?	78·1	?	20·0	111·4	43·9	67·5	33·8
Bihar (North)	Purnea	125	29·734	+·014	29·816	30·063	29·341	·722	·286	71·7	86·7	−0·1	66·6	+0·6	76·7	+0·3	20·1	102·3	41·7	60·6	31·5
	Bhagalpur	160	29·685	?	29·800	30·025	29·276	·749	·293	74·9	87·7	?	67·5	?	77·6	?	20·2	107·3	42·2	65·1	33·1
	Darbhanga	166	29·684	+·003	29·808	30·029	29·272	·757	·302	73·1	85·7	+0·1	68·7	+0·2	77·3	+0·2	17·0	101·5	46·3	55·2	28·2
	Muzaffarpur	178	29·675	?	29·811	30·011	29·263	·748	·293	72·6	86·2	?	66·6	?	76·4	?	19·5	103·7	42·3	61·4	31·9
	Motihari	224	29·625	?	29·811	29·967	29·208	·759	·299	72·8	86·3	?	64·8	?	75·6	?	21·5	102·5	39·5	63·0	34·3
	Chapra	181	29·663	?	29·802	30·008	29·245	·763	·295	73·4	87·9	?	67·7	?	77·8	?	20·2	109·2	44·5	64·7	32·8
N.-W. P. (Eastern Districts).	Benares	267	29·575	+·010	29·804	29·936	29·102	·834	·292	73·0	89·0	−0·6	66·2	−0·7	77·6	−0·7	22·8	114·3	41·0	73·3	37·2
	Allahabad	309	29·529	+·004	29·799	29·877	29·061	·816	·274	74·8	90·0	+0·1	67·2	+0·6	78·6	+0·4	22·8	114·7	41·9	72·8	37·4
N.-W. P. (East Submontane).	Gorakhpur	256	29·579	+·008	29·799	29·920	29·163	·757	·299	73·0	87·2	−0·9	66·9	−0·3	77·0	−0·6	20·3	110·3	43·3	67·0	33·7
Oudh (South)	Lucknow	368	29·464	+·005	29·800	29·822	29·066	·756	·282	73·6	88·9	−0·7	65·4	+0·1	77·2	−0·3	23·5	114·3	41·0	73·3	38·5
Oudh (North)	Bahraich	403	29·434	?	29·808	29·776	29·024	·752	·292	72·5	87·1	?	65·8	?	76·5	?	21·3	110·6	40·1	70·5	35·5
N.-W. Provinces (Central).	Cawnpore	416	29·418	?	29·798	29·765	29·010	·755	·270	74·2	89·5	?	65·8	?	77·7	?	23·6	114·1	40·0	74·1	39·0
	Mainpuri	516	29·315	?	29·801	29·668	29·023	·645	·275	72·6	89·5	?	65·8	?	77·7	?	23·7	116·2	41·6	74·6	39·0

* Mean of 11 months. † Mean of 8 months. ‡ Mean of 9 months. § Mean of 10 months.

l—continued.

in India, Burma, etc., in the year 1895—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount of year.	Rainfall.						Heaviest rainfall during year.	Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.		Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.			
215	7	3	32	18	16	9	59	6	2·0	P	P	74	·681	3·6	66	82·80	−16·80	48·29	56·59	− 8·30	3·86	Bankura	Central Bengal.
175	20	14	33	17	12	16	27	45	1·9	P	P	76	·674	3·3	61	72·85	−11·85	44·00	53·25	− 9·25	3·06	Raniganj. (*a*)	
90	47	26	20	35	45	46	21	35	2·9	3·3	−12	76	·695	4·3	62	78·00	−16·00	45·76	56·90	−11·14	3·23	Burdwan.	
41	19	14	53	51	37	22	43	79	4·2	P	P	72	·645	3·6	74	79·41	− 5·41	42·91	57·23	−14·32	3·35	Naya Dumka. (*a*)	
37	32	16	61	35	61	60	36	27	3·1	3·5	−11	84	·737	4·3	65	77·93	−12·93	35·85	56·31	−20·46	3·63	Berhampore.	
115	51	23	26	55	42	39	10	4	4·3	P	P	82	·751	3·2	65	74·56	− 9·56	42·99	58·19	−15·20	3·28	Rampur Boalia.	
21	9	25	9	64	44	70	21	84	2·7	P	P	81	·714	3·2	57	68·25	−11·25	37·18	55·48	−18·30	2·80	Malda. (*b*)	
117	28	33	15	107	15	16	24	10	2·4	P	P	83	·733	3·6	79	81·63	− 2·63	50·09	65·78	−15·69	2·80	Bogra.	
28	23	80	75	28	27	38	44	22	3·7	P	P	84	·692	4·0	74	77·10	− 3·10	69·89	68·58	+ 1·31	5·15	Dinajpur	North Bengal.
31	30	115	60	29	42	34	10	14	2·3	P	P	86	·712	4·5	75	78·70	− 3·70	66 19	82·81	−16·62	6·20	Rangpur.	
57	42	67	76	49	12	3	3	25	2·4	P	P	85	·699	5·8	104	103·89	+ 0·11	120·87	127·42	− 6·55	7·45	Jalpaiguri.	
48	66	24	5	1	40	97	23	61	4·9	P	P	81	·762	2·8	72	84·60	−12·60	60·09	64·64	− 4·55	3·12	Balasore	Orissa.
9	92	16	16	12	51	66	54	49	9·1	9·1	0	84	·813	5·2	56	75·00	−19·00	61·43	68·10	− 6·67	4·71	False Point.	
145	15	28	12	16	21	67	51	10	2·9	2·9	0	80	·747	4·0	71	75·35	− 4·35	68·21	57·75	+10·46	5·37	Cuttack.	
7	70	31	10	25	61	83	45	32	P	P	P	79	·823	3·5	63	P	P	69·88	P	P	4·94	Shortt's Island. (*c*)	
75	95	33	3	6	10	93	35	15	10·5	P	P	82	·813	3·8	51	67·55	−16·55	74·10	54·18	+19·92	7·89	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41·35	45·50	−3·61	...	**V.—Gangetic Plain and Chota Nagpur.**	
48	18	4	30	31	84	49	50	51	8·0	6·8	+18	67	·538	4·6	81	75·64	+ 5·36	48·36	52·75	− 4·39	3·10	Hazaribagh . . .	Chota Nagpur.
88	20	26	15	18	15	64	56	61	6 8	P	P	79	·554	2·8	78	82·69	− 4·69	54·59	55·29	− 0·70	3·71	Ranchi.	
...	26	14	27	33	97	80	56	32	4·0	P	P	75	·659	3·1	49	P	P	29·93	P	P	3·08	Daltonganj.	
78	19	16	5	6	20	92	93	35	1·6	P	P	76	·662	3·8	67	77·21	−10·21	47·86	54 12	− 6·56	3·42	Chaibasha.	
90	5	28	48	25	69	50	45	5	4·6	2·5	+84	70	·634	3·3	57	56·18	+ 0·82	32 01	47·22	−15·21	2·02	Gaya.	Bihar (South).
20	2	10	51	29	62	138	34	15	7·1	P	P	70	·643	3·4	45	54·74	− 9·74	38·88	43·11	− 4·23	4·46	Dehri. (*d*)	
31	1	35	103	17	25	46	96	11	4·5	3·0	+50	71	·653	3·4	56	55·72	+ 0·28	43·89	46·25	− 2·36	3·85	Patna.	
3	20	41	54	42	30	66	72	37	3·1	P	P	77	·674	2·7	57	55·69	+ 1·31	37·38	41·94	− 4·56	3·42	Arrah.	
27	10	29	98	20	17	52	94	18	3·9	P	P	70	·635	3·2	46	53·95	− 7·95	48·62	39·82	+ 8·80	9·11	Buxar.	
59	18	67	99	20	15	49	21	17	4·2	2·4	+75	83	·679	3·9	67	70·37	− 3·37	45·28	66·40	−21·12	3·86	Purnea	Bihar (North).
53	6	49	48	55	53	54	36	11	3·8	P	P	74	·675	3·6	57	60·55	− 3·55	42·21	44·24	− 2·63	3·73	Bhagalpur.	
48	11	25	94	73	8	26	50	30	4·3	3·8	+13	80	·680	3·1	67	60·17	+ 6·83	38·85	51·51	−12·66	2·51	Darbhanga.	
107	...	23	86	63	...	31	42	12	3·9	P	P	84	·711	2·3	55	56·41	− 1·41	44·94	48·26	− 3·32	4·51	Muzaffarpur. (*c*)	
45	5	69	94	29	...	48	54	21	4·6	P	P	82	·684	2·8	70	53·13	+16 87	64·92	47·37	+17·55	4·69	Motihari.	
38	5	17	96	49	15	63	63	19	4·4	P	P	78	·675	3·4	55	51·35	+ 8·65	36·66	42·28	− 5·62	3·17	Chapra.	
146	7	12	55	12	19	54	52	8	3·8	3·9	− 3	76	·651	3·3	41	50·54	− 9·54	28·53	39·43	−10·90	4·95	Benares	N.-W. P. (Eastern Districts).
60	12	33	48	20	25	40	85	42	4·7	2·8	+68	70	·617	3·4	47	48·47	− 1·47	28·40	39·44	−11·04	2·87	Allahabad.	
21	53	18	58	35	49	25	56	50	1·8	2·5	−28	75	·843	3·1	71	52·29	+18·71	51·26	51·35	− 0·09	4·84	Gorakhpur . . .	N.-W. P. (East Submontane).
57	17	39	46	30	21	60	53	42	P	3·1	P	73	·633	3·6	55	46·83	+ 8·17	36·25	38·80	− 2·55	4·14	Lucknow	Oudh (South).
117	15	14	63	59	8	15	22	52	2·6	P	P	77	·650	1·7	61	P	P	50·91	40·94	+ 9·97	4·45	Bahraich	Oudh (North).
70	13	15	51	37	17	25	105	32	4·1	P	P	68	·612	2·2	33	41·40	− 8·40	27·29	31·09	− 3·80	2·80	Cawnpore	N.-W. Provinces (Central).
244	4	7	24	15	7	18	43	3	0·9	P	P	69	·585	3·0	35	P	P	32·67	33·09	− 0·42	3·08	Mainpuri.	

(*a*) Wind observations of 359 days.
(*b*) Wind observations of 347 days.
(*c*) Wind observations of 364 days.
(*d*) Wind observations of 361 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.							Temperature of Air.											
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
VI.—Upper Sub-Himalayas		...	...	+·006	...	...	...	...	...	...	86·9	0	63·3	+1·0	75·0	+0·5	23·4	...	...	76·6	38·7
N.-W. Provinces (Submontane).	Bareilly	568	29·256	+·014*	29·803	29·606	28·834	·772	·294	70·8	86·7	−0·8	64·8	+0·4	75·8	−0·2	21·9	113·4	40·2	73·2	37·3
	Debra Dun	2,233	27·605	−·001	29·831	27·916	27·249	·667	·289	65·7	81·0	+0·3	60·6	−0·3	70·8	0	20·4	106·0	38·0	68·0	33·5
	Roorkee	887	28·928	+·002	29·809	29·275	28·521	·754	·301	68·6	86·6	−0·6	62·5	0	74·6	−0·3	24·1	113·2	36·9	76·3	38·7
	Meerut	738	29·077	+·003	29·800	29·423	28·707	·716	·286	70·0	87·5	−0·3	64·5	+1·0	76·0	+0·4	23·0	113·9	41·1	72·8	37·8
Punjab (Central)	Delhi	718	29·102	+·003	29·800	29·454	28·745	·709	·280	73·2	88·8	−0·4	67·4	+0·2	78·1	−0·1	21·4	116·0	41·9	74·1	36·7
	Lahore	702	29·109	+·005	29·801	29·484	28·699	·785	·307	70·5	89·4	+0·8	64·7	+3·3	77·1	+2·1	24·7	117·3	35·2	82·1	40·5
Punjab (Submontane).	Umballa	962 ?	28·899	?	29·805	29·249	28·496	·753	·307	69·7	87·4	?	63·1	?	75·3	?	24·2	114·9	34·5	80·4	41·0
	Patiala	?	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ludhiana	812	29·003	+·006	29·805	29·357	28·610	·747	·311	70·9	87·9	−0·7	64·6	+1·4	76·3	+0·3	23·3	116·8	37·4	79·4	38·7
Punjab (North)	Sialkot	830	28·990	+·020†	29·813	29·346	28·590	·756	·307	70·4	87·8	+0·3	62·1*	+1·1*	74·1*	+0·4*	23·8	115·9	36·0	79·9	40·0
	Rawalpindi	1,643 ?	28·153	+·005*	29·831	28·501	27·740	·761	·298	66·6	85·5	+1·6	58·6	+1·6	72·1	+1·6	26·9	111·5	31·9	79·6	42·4
VII.—Indus Valley and N.-W. Rajputana.		...	...	0	...	...	...	...	...	...	92·0	+1·4	65·1	+0·9	78·8	+1·1	26·6	...	...	82·4	43·3
Punjab (West)	Peshawar	1,110	28·743	+·008	29·819	29·115	28·284	·831	·322	67·4	85·9	+0·3	60·0	+1·2	72·9	+0·7	25·9	114·0	31·9	82·1	43·5
	Mardan	?	?	?	...	...	...	...	...	65·4	86·9	?	58·2	?	72·5	?	28·7	113·5	27·0	86·5	46·7
	Khushab	612	29·201	?	29·800	29·624	28·756	·868	·321	71·9	94·5†	?	64·4	?	81·5†	?	26·1†	118·4	31·0	87·4	44·4
	Montgomery	558	29·250	?	29·787	29·658	28·838	·820	·301	74·6	93·3	?	64·8	?	79·1	?	28·5	121·9	31·5	90·4	46·3
	D. I. Khan	594 ?	*29·251*	−·003†	29·818*	29·645	28·764	·881	·325*	69·6	90·8	+0·4	62·5	+0·3	76·6	+0·3	28·3	116·1	31·0	85·1	46·5
	Mooltan	420	29·394	−·007?	29·794	29·824	28·941	·883	·305	73·0	93·4	+2·2	66·8	+2·2	80·1	+2·2	26·6	120·5	36·6	83·9	42·2
	Sirsa	662	29·149	−·001	29·792	29·521	28·760	·761	·285	72·4	93·8	+2·5	65·7	+2·3	79·8	+2·4	28·1	114·6	34·7	79·9	45·9
Sind and Cutch	Jacobabad	186	29·639	+·011	29·790	30·077	29·167	9.0	·306	75·6	96·7	+1·7	66·7	+2·1	81·7	+1·8	30·0	123·0	31·5	91·5	46·9
	Hyderabad	96	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kurrachee	12	29·855	−·010	29·817	30·214	29·354	·860	·241	75·0	87·4	+0·6	69·9	−0·1	78·7	+0·3	17·5	110·6	45·1	65·5	31·5
	Bhuj	395	29·467	−·001	29·821	29·763	29·011	·752	·216	75·7	91·8	+0·7	68·3	−0·3	80·1	+0·2	23·5	110·1	42·5	67·6	36·2
Rajputana (West)	Bickaneer	771 ?	29·053	?	29·784	29·454	28·662	·792	·273	75·6	94·0	+2·4	69·3	−0·6	81·7	+0·8	24·6	118·3	39·1	79·2	42·0
	Pachpadra	380	29·453*	?	29·793*	29·873	28·990	·883	·293	72·9	95·9	?	65·0	?	80·5	?	30·9	119·7	30·0	89·7	47·4
VIII.—East Rajputana, Central India and Gujarat.		...	...	+·008	...	...	...	...	...	...	90·6	+0·7	67·1	+0·7	78·9	+0·7	23·5	...	...	71·0	37·7
Rajputana (East)	Jeypore	1,431	28·424	+·008	29·839	28·752	28·053	·699	·244	73·2	91·0	+0·9	65·8	+1·2	78·4	+1·1	25·2	115·5	38·7	76·8	39·9
	Sambhar	1,254	28·585	+·006	29·825	28·918	28·211	·707	·250	72·5	90·5	+1·9	65·5	+1·0	78·0	+1·5	25·0	113·0	38·0	75·0	41·9
	Ajmere	1,611	28·255	+·008	29·861	28·586	27·865	·721	·239	71·1	89·5	+1·1	65·2	+1·7	77·4	+1·4	24·3	113·4	35·9	77·5	39·9
	Deesa	466	29·407	+·007	29·837	29·708	28·944	·764	·222	75·0	95·1	+1·9	66·5	−0·3	80·8	+0·8	28·6	117·4	38·0	79·4	43·2
Kathiawar	Rajkot	429	29·454	+·007	29·841	29·746	28·988	·758	·208	77·3	93·0	0	65·6	−0·4	79·3	−0·2	27·4	111·4	39·1	72·3	40·1
	Veraval	?	29·872	?	29·832	30·175	29·370	·805	·206	76·1	85·2	?	70·9	?	78·1	?	14·3	98·1	47·3	50·8	26·7
Central India	Nowgong	757	29·089	−·004	29·818	29·423	28·708	·715	·235	73·1	89·5	−0·4	66·5	+1·2	78·0	+0·4	23·1	115·6	42·0	73·6	37·7
	Indore	1,823	28·059	+·018	29·857	28·314	27·672	·642	·198	72·1	88·2	+0·7	63·9	+0·4	76·1	+0·6	24·3	111·5	37·6	73·9	38·1
	Neemuch	1,630	28·252	+·029	29·861	28·553	27·825	·727	·227	73·7	89·4	+0·9	64·8	+0·6	77·2	+0·7	24·6	112·2	39·9	72·3	39·4
Gujarat	Surat	36	29·862	+·002	29·842	30·118	29·428	·690	·207	76·3	91·2	−0·1	69·2	+0·3	80·8	+0·1	21·9	108·1	50·1	58·0	34·0
	Ahmedabad	176	29·720	?	29·848	30·026	29·280	·746	·218	76·7	93·9	?	70·6	?	82·3	?	23·4	113·3	48·7	65·6	35·4
N.-W. P. (West)	Agra	555	29·279	−·005*	29·805	29·630	28·909	·721	·269	74·8	90·3	−0·2	67·8	+0·5	79·1	+0·1	22·5	115·5	41·4	74·1	37·5
	Jhansi	858	28·994	+·007	29·821	29·326	28·610	·716	·247	76·4	91·3	+0·5	70·2	+2·0	80·8	+1·3	21·1	117·2	43·9	73·3	35·7

* Mean of 11 months. † Mean of 10 months.

I—*continued.*

in India, Burma, etc., in the year 1895—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, Sa.M.		Mean cloud amount of year.	Rainfall.					Heaviest rainfall during year.	Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.		Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36·37	40·05	−3·68	...	VI.—Upper Sub-Himalayas.
155	10	23	4	93	2	4	11	63	2·2	3·5	− 37	72	·576	2·5	45	47·17	−2·17	38·53	49·61	−11·08	3·83	Bareilly	N.-W. Provinces (Submontane).
345	1	3	2	6	3	1	2	2	1·1	1·8	− 39	73	·496	4·1	78	79·59	−1·59	83·37	88·88	− 5·51	8·20	Dehra Dun.
208	8	9	17	68	10	6	9	30	2·6	2·5	+ 4	74	·546	2·9	51	46·57	+4·43	45·13	43·82	+ 1·31	6·69	Roorkee.
201	3	8	38	26	...	21	64	4	1·8	2·2	− 18	63	·535	2·8	45	39·18	+5·82	47·51	32·89	+14·62	4·20	Meerut.
106	5	4	47	37	8	9	132	17	3·8	3·6	+ 6	59	·508	3·0	45	33·74	+11·26	19·30	30·03	−10·73	1·28	Delhi	Punjab (Central).
121	40	22	43	61	20	4	35	19	2·7	2·5	+ 8	66	·515	2·4	29	28·26	+0·74	12·16	21·95	− 9·79	1·19	Lahore.
179	3	4	49	59	4	5	12	50	1·7	?	?	74	·574	2·5	41	?	?	31·06	33·13	+ 0·93	4·40	Umballa	Punjab (Submontane).
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Patiala.
135	7	23	3	92	32	13	24	35	2·3	1·5	+ 53	67	·537	3·5	37	37·00	0	22·78	30·90	− 8·12	3·54	Ludhiana.
205	40	11	80	7	11	1	8	2	2·1	1·8	+ 17	65	·510	2·5	44	38·36	+5·64	30·60	34·12	− 3·52	3·55	Sialkot	Punjab (North).
164	25	31	22	40	9	8	19	35	2·5	2·0	+ 25	64	·446	3·1	43	46·81	−3·81	30·29	35·17	− 4·88	4·86	Rawalpindi.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11·74	10·38	+0 31	...	VII.—Indus Valley and N.-W. Rajputana.
162	36	18	14	16	38	34	9	38	3·4	3·4	0	63	·459	2·8	22	21·56	+0·44	13·34	13·54	− 0·20	1·96	Peshawar . . .	Punjab (West).
			Not	rec	orde	d.			?	?	?	?	?	?	38	?	?	23·26	?	?	3·50	Mardan.
90	21	94	83	18	11	24	17	7	4·4	?	?	57	·495	2·1	22	16·40	+5·60	15·68	10·39	+ 5·29	2·65	Khushab.
90	25	27	34	58	48	50	21	12	5·0	?	?	56	·493	2·3	23	15·70	+7·30	14·46	9·89	+ 4·57	2·63	Montgomery.
227	11	36	48	6	2	1	9	25	2·5	1·8	+ 39	66	·538	1·6	21	14·73	+6·27	11·85	8·42	+ 3·43	1·74	D. I. Khan.
103	8	86	12	68	6	68	5	9	1·8	2·5	− 28	62	·536	1·9	14	11·72	+2·28	10·39	7·56	+ 2·83	2·10	Mooltan.
85	14	12	38	58	24	27	82	25	6·0	3·6	+ 67	56	·468	3·0	20	23·39	−3·39	9·35	15·55	− 6·20	1·25	Sirsa.
143	27	15	34	70	37	8	4	22	3·7	3·4	+ 9	58	·588	2·2	8	6·63	+1·37	3·12	4·08	− 0·96	0·88	Jacobabad . . .	Sind and Coton.
...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Hyderabad.
3	29	70	35	6	9	78	91	44	11·7	13·3	− 12	73	·690	3·6	8	9·73	−1·73	4·85	7·92	− 3·07	2·45	Kurrachee.
43	20	11	13	11	15	63	127	55	12·2	10·2	+ 20	68	·645	2·2	12	?	?	12·11	14·61	− 2·50	4·95	Bhuj.
24	24	27	23	21	57	114	30	45	5·8	4·8	+ 21	49	·464	2·9	18	?	?	11·03	11·95	− 0·92	2·12	Bickaneer . . .	Rajputana (West).
149	7	15	17	56	43	54	6	18	9·8*	5·9	+ 66	67	·604	4·8	19	?	?	11·44	10·28	+ 1·16	3·20	Pachpadra.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24·99	32·36	−7·32	...	VIII.—East Rajputana, Central India and Gujarat.
90	20	27	22	8	5	34	104	55	4·0	5·1	− 22	60	·521	3·1	34	38·70	−4·70	23·55	28·76	− 5·21	2·75	Jeypore	Rajputana (East).
148	25	18	19	8	8	9	120	10	4·8	6·7	− 28	61	·516	2·9	27	32·56	−5·56	16·59	22·91	− 6·32	2·51	Sambhar.
141	3	22	5	18	8	49	108	11	5·1	4·3	+ 19	66	·522	2·7	24	32·99	−8·99	24·13	22·18	+ 1·95	4·55	Ajmere.
2	29	52	40	21	33	88	76	24	9·7	10·3	− 6	54	·511	2·6	29	28·81	+0·19	14·41	26·73	−12·32	2·12	Deesa.
30	26	68	39	4	1	26	110	61	8·5	9·2	− 8	65	·634	2·3	34	33·94	+0·06	18·75	28·67	− 9·92	3·81	Rajkot	Kathiawar.
39	97	54	7	5	5	31	91	31	8·5	?	?	70	·666	3·8	34	?	?	15·79	?	?	3·52	Veraval. (a)
104	23	17	20	4	18	41	131	7	2·4	2·5	− 4	68	·561	3·5	47	49·75	−2·75	36·58	44·43	− 7·85	2·94	Nowgong	Central India
79	36	26	11	19	22	31	81	60	3·2	4·2	− 24	67	·544	3·8	48	48·00	0	32·65	34·91	− 2·26	5·00	Indore.
35	24	65	44	20	5	66	92	13	8·4	10·1	− 17	58	·503	2·8	32	39·18	−7·18	26·36	32·26	− 5·90	3·30	Neemuch. (b)
43	25	27	37	8	13	72	88	52	?	9·0	?	71	·677	3·3	48	49·36	−1·36	29·07	46·34	−17·27	3·35	Surat	Gujarat.
8	27	66	40	16	10	83	32	52	5·7	?	?	60	·584	3·8	34	?	?	33·63	?	?	9·10	Ahmedabad. (c)
48	1	25	...	56	1	136	..	98	4·1	4·2	— 2	61	·545	2·7	38	38·91	−0·91	22·18	29·12	− 6·64	2·23	Agra	N.-W. P. (West).
94	14	17	10	17	15	92	61	45	3·2	2·9	+ 10	57	·530	2·2	49	49·07	−0·07	30·85	39·63	− 8·78	3·11	Jhansi.

* Mean of 11 months.

(a) Wind observations of 360 days.

(b) Wind observations of 361 days.

(c) Wind observations of 334 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.							Temperature of Air.										
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
IX.—Deccan	...	...	...	+·010	...	...	...	...	...	...	90·3	+0·4	67·7	+0·6	79·0	+0·5	22·6	...	...	65 6	34 8
Bombay (Deccan)	Belgaum	2,524	27·389	+·007	29·859	27·576	27·092	·484	·159	71·4	84·3	0	61·2	+0·2	74·3	+0·1	20·1	101·2	49 9	51·3	28·8
	Sholapur	1,590	28·312	+·008	29·862	28·541	27·998	·543	·175	76·4	92·5	−0·2	68·4	+0·9	80·5	+0·4	24·1	110·2	47·6	62·6	35·0
	Poona	1,840	28·069	+·004	29·876	28·279	27·724	·555	·175	72·2	89·8	+1·1	61·8	−0·2	77·3	+0·5	25·0	109·1	45·5	63·6	36·5
	Bijapur	1,946	27·964	?	29·865	28·168	27·661	·507	·168	74·2	89·5	?	66·9	?	78·3	?	22·6	107·3	44·1	63·2	33·7
Khandesh	Malegaon	1,430	28·459	+·004*	29·857	28·699	28·100	·599	·193	75·0	91·6	+0·6	65·6	+0·8	78·6	+0.7	26·0	110·8	41·9	68·9	38·1
	Ahmednagar	2,152	27·758	?	29·867	27·976	27·440	·536	·181	73·3	88·4	?	63·5	?	76·0	?	24·9	107·2	39·4	67·8	38·3
Berar	Akola	930	28·943	+·006	29·836	29·219	28·583	·636	·204	75·2	93·3	+1·2	67·8	+1·1	80·6	+1·2	25·5	113·5	42·2	71·3	37·9
	Amraoti	1,215	28·656	+·012	29·839	28·953	28·296	·657	·204	75·6	92·2	+0·7	69·6	+1·3	80·9	+1·0	22·6	113·3	48·9	64·4	33·6
Central Provinces (West).	Khandwa	1,044	28·834	+·015	29·852	29·117	28 457	·660	·207	73·9	92·2	+1·1	67·4	+1·0	79·8	+1·1	24·8	113·7	42·1	71·6	38 6
	Hoshangabad	1,000	28·856	+·010	29·858	29·159	28·444	·715	·219	72·7	89·9	−0·3	67·3	+0·6	78·6	+0·1	22·6	113·6	42·8	70·8	36·1
	Nagpur	1,025	28·832*	+·011*	29·825*	29·139	28·442	·697	*·215	75·6	92·1	+0·1	69·0	+0·5	80·6	+0·3	23·1	114·2	47·2	67·0	36 3
Central Provinces (Central).	Chanda	634	29·239	+·012	29·827	29·530	28·878	·652	·213	76·3	92·9	+0·3	68·8	+0·4	80·8	+0·3	24·1	114 9	42·5	72·4	36·5
	Seoni	2,033	27·842	+·013*	29·835	28·111	27·444	·667	·219	73·2	87·7	+0·2	66·3*	+0·2*	77·6*	+0·2*	22·3*	110·3	42·0	68·3	*36 1
	Jubbulpore	1,327	28·519	?	29·825	28·810	28·083	·727	·219	72·0	88·8	+0·7	64·5	+0·1*	76·7	+0 2*	24·3	112·5	38 4	74·1	38·7
	Saugor	1,762	28·095	+·017†	29·832	28·376	27·701	·675	·213	72·6	88·2	+0·6	67·1	+1·6	77·7	+1·1	21·1	113·4	42·0	71·4	35·2
Central Provinces (East).	Raipur	970	28·690	+·016	29·823	29·211	28·475	·736	·229	76·3	90·7	+0·7	69·6	+0·7	80·2	+0·7	21·1	113·0	47·9	65·1	34·2
	Sutna	1,040	28·794	+·003	29·813	29·113	28·395	·718	·235	73·9	88·3	+0·6	66·4	+1·3	77·4	+1·0	21·9	113·1	41·2	71·9	37 1
	Sambalpur	463	29·383	+·012	29·823	29·724	28·907	·817	·253	76·8	91·2	+0·3	69·3	−0·6*	80·3	−0·2*	21·8	115·0	42·2	72·8	34·4
Hyderabad (North).	Aurangabad	·P	28·047	?	?	28·267	27·711	·576	·186	76·6	91 2	?	65·7	?	78·5	?	25·5	111·0	43·9	67·1	36·7
	Indur	?	?	?	?	?	?	?	?	77·3	90·8	?	69·4	?	80·1	?	21·4	108·6	43·9	64·7	33·2
	Bidar	?	27·735	?	?	27·970	27·437	·533	·189	74·5	87·0	?	68·3	?	77·7	?	18·7	101·8	53·4	48·4	28·0
Hyderabad (South).	Gulbarga	1,502	*28 391	?	29·852*	28·676	28·134	·542	·182	75·6	91·6	?	68·7	?	80·1	?	22·9	109·8	47·1	62·7	55·0
	Raichur	1,378	28·522	?	29·852	28·752	28·200	·552	·182	76·5	91·5	?	71·5	?	81·5	?	20·0	110·9	53·2	57·7	31·0
	Hyderabad (Deccan)	1,690	28·207	+·009	29·859	28·451	27·910	·541	·196	74·5	89·4	−0·7	68·9	+0·9	79·2	+0·2	20·5	108·4	47·3	61·1	31·0
	Secunderabad	1,787	28·118	?	29 869	28·352	27·815	·537	·191	73·3	90·0	?	68·2	?	79·2	?	21·8	109·8	48·6	61·2	32·9
	Khamamet	373	29·519	?	29·841	29 795	29·154	·641	·212	77·8	92·0	?	72·6	?	82·3	?	19·4	113·7	50·2	63·5	32·3
X.—West Coast	...	...	...	+·002	...	...	...	...	...	...	86·3	+0·7	74·8	+0 8	80·6	+0 7	11·6	...	...	31·4	19·1
Konkan	Bombay	37	29·878	+·007	29·855	30·097	29·481	·616	·193	77·8	85·8	+0·3	74·9	+0·3	80·4	+0·3	10·9	94·0	61·0	33·0	19·0
	Ratnagiri	110	29·801	+·014	29·850	29·990	29·487	·503	·169	78·8	87·6	+0·3	73·8	+1·1	80·7	+0·7	13·8	96·9	60 9	36·0	22·8
	Mormugao	60	29·864	?	29·860	30·042	29·554	·488	·161	78·5	86·0	?	75·1	?	80·6	?	11·0	93·0	63 3	29·7	18·5
	Goa	199	29·716	+·009	29·853	29·907	29·400	·507	·161	78·8	83·9	?	76·0	?	79·9	?	7·8	92·0	65·0	27·0	14·7
	Karwar	44	29·884	+·009	29·860	30·049	29·565	·484	·158	76·4	86·4	+0·4	73·5	+1·0	80·0	+0·7	12·9	94·8	56·5	38·3	20·8
Malabar	Cochin	11	29·924	−·009	29·862	30·047	29·767	·280	·136	79·1	88·4	+1·4	75·4	+0·9	81·9	+1·1	13·0	95·3	68·3	27·0	20·2
	Calicut	27	29·906	−·008	29·862	30·042	29·730	·312	·141	79·3	87·5	+0·7	74·4	+0·6	81·0	+0·7	13·1	93·4	61·5	31·9	20·3
	Mangalore	23	29·910	−·006	29·863	30·042	29·687	·355	·142	79·0	87·3	+0·8	74·5	+0·6	80·9	+0·7	12·8	95·3	61·5	33·8	20·4
	Trivandrum	198	29·734	?	29·865	29·858	29·598	·260	·142	78·2	84·1	?	75·3	?	79·7	?	8·8	93·5	68·0	25·5	15·3
XI.—South India	...	...	...	+·006	...	...	...	...	...	...	89·3	0	71·7	0	80·5	0	17·5	...	...	48·5	27·9
Madras (South)	Pambau	37	29·886	?	29·850	30·054	29·691	·363	·143	81·9	87·2	?	78·1	?	82·7	?	9·1	93·8	70·2	23·6	16·1
	Tinnevelly	168	29·762	?	29·860	29·929	29·568	·361	·143	81·5	94·5	?	76·5	?	85·5	?	18·1	105·5	67·9	37·6	27·2
	Madura	447	29·471	?	29·856	29·639	29·279	·360	·149	80·4	93·3	−0·9	74·0	+0·4	83·7	−0·3	19·3	103·0	64·2	38·8	27·9

* Mean of 11 months.

† Mean of 10 months.

I—*continued.*

in India, Burma, etc., in the year 1895—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount of year.	Rainfall.						Heaviest rainfall during year.	Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.		Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.			
...	...	...	..	...	...	...	...	...	...	...	..	...	...	...	...	...	...	38·47	43·88	−4·36	...	IX.—Deccan.	
67	19	20	56	38	11	35	93	26	14·3	15·7	− 9	72	·518	4·4	86	83·08	+ 2·92	52·25	48·74	+ 3·51	2·63	Belgaum	Bombay (Deccan).
18	17	31	33	82	12	46	43	83	11·8	8·9	+ 33	57	·523	3·8	37	51·01	−14·01	31·60	35·90	− 2·30	6·69	Sholapur.	
131	2	6	25	17	2	44	98	40	7·2	10·0	− 28	64	·513	4·0	44	49·33	− 5·36	30·06	28·74	+ 1·32	4·21	Poona.	
12	1	11	66	50	2	56	116	51	6·2	?	?	79	·602	4·3	41	43·52	− 2·52	29·04	?	?	3·63	Bijapur.	
27	21	15	6	4	7	47	126	112	12·1	7·2	+ 68	70	·624	3·9	35	40·57	— 5·57	23·38	25·60	− 2·22	4·80	Malegaon	Khandesh.
111	53	34	5	20	13	42	43	44	10·3	?	?	71	·588	3·6	36	?	?	23·73	?	?	3·95	Ahmednagar.	
57	3	27	51	36	12	29	90	66	6·4	5·5	+ 16	61	·540	3·4	40	50·58	−10·58	27·04	37·90	−10·06	4·04	Akola	Berar.
...	29	57	42	47	12	57	70	51	5·9	4·7	+ 26	60	·535	3·2	37	50·99	−13·99	25·15	37·41	−12·26	2·28	Amraoti.	
65	13	37	30	18	6	20	98	78	6·7	5·4	+ 24	61	·595	3·2	37	44·36	− 7·36	22·09	33·29	−11·20	3·68	Khandwa	Central Provinces (West).
85	1	57	59	6	10	75	65	6	3·1	3·0	+ 3	69	·570	3·8	55	60·53	− 5·53	42·45	56·58	−14·13	7·04	Hoshangabad. (*a*)	
213	16	13	12	10	9	25	39	28	5·9	5·0	+ 13	69	·621	4·2	62	64·93	— 2·93	57·79	50·91	+ 6·88	7·90	Nagpur.	
98	25	29	30	36	11	47	64	25	3·6	3·7	− 3	65	·588	3·7	65	?	?	40·44	58·53	−18·09	2·96	Chanda	Central Provinces (Central).
				Not	rec	orded.			?	3·9	?	69	·539	3·7	68	73·65	— 5·65	41·05	58·89	−17·84	2·84	Seoni.	
28	11	34	37	51	60	39	68	37	2·9	3·3	− 12	69	·549	3·1	59	65·62	— 6·62	54·12	60·37	− 6·25	6·31	Jubbulpore.	
131	9	15	21	29	25	68	48	19	3·4	3·5	− 3	64	·520	2·9	60	56·93	+ 3·07	46·56	48·93	− 2·37	4·56	Saugor.	
105	37	25	21	12	9	69	67	29	6·5	5·6	+ 16	65	·598	3·6	63	65·61	— 2·61	44·51	52·52	− 7·71	4·02	Raipur	Central Provinces (East).
43	80	14	30	19	29	16	86	48	5·9	6·1	− 3	64	·539	2·8	51	52·91	— 1·91	45·46	46·48	− 1·02	5·50	Sutna.	
...	83	70	22	32	40	81	4	31	4·4	2·3	+ 11	70	·658	3·4	70	?	?	58·95	68·05	− 9·10	3·60	Sambalpur. (*b*)	
120	8	51	26	16	16	51	51	26	4·3	?	?	56	·510	3·8	47	?	?	31·79	32·27	− 0·48	2·48	Aurangabad	Hyderabad (North).
56	28	9	40	31	32	40	57	72	8·2	?	?	79	·660	4·9	57	?	?	36·34	37·40	− 1·06	3·30	Indur.	
...	33	28	45	36	34	72	82	35	8·4	?	?	72	·613	2·8	70	?	?	48·24	42·04	+ 6·20	4·15	Bidar.	
59	12	47	56	24	26	47	49	45	10·5	?	?	65	·584	3·9	48	?	?	39·02	29·19	+ 9·83	5·20	Gulbarga	Hyderabad (South).
...	15	21	42	53	55	55	81	42	8·4	?	?	66	·604	3·4	45	?	?	29·61	?	?	2·42	Raichur. (*a*)	
126	3	15	17	38	12	5	115	31	5·5	?	?	73	·626	3·9	46	?	?	30·43	33·72	− 3·29	3·02	Hyderabad (Deccan). (*c*)	
50	5	35	78	27	6	30	81	53	7·2	6·5	+ 11	69	·568	3·4	53	?	?	35·12	?	?	3·00	Secunderabad.	
182	4	6	4	56	35	17	35	26	6·5	?	?	79	·760	2·3	61	?	?	53·58	?	?	4·09	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	89·22	104·55	−15·18	...	X.—West Coast.	
...	41	75	71	32	24	40	53	29	11·1	12·2	− 9	79	·774	4·2	74	76·63	− 2·63	67·59	74·12	− 6·53	5·07	Bombay	Konkan.
...	41	75	71	32	24	40	53	29	11·1	12·2	− 9	79	·774	4·2	74	76·63	− 2·63	67·59	74·12	− 6·53	5·07	Ratnagiri.	
24	39	44	37	69	34	53	19	46	6·7	10·2	− 34	73	·729	4·5	98	97·80	+ 0·20	87·66	111·65	−23·99	4·82	Mormagao. (*a*)	
25	55	16	72	62	17	10	20	38	9·5	?	?	80	·807	3·5	88	?	?	88·11	?	?	5·79	Goa.	
61	27	41	115	5	9	22	50	34	7·3	?	?	77	·762	4·9	88	?	?	70·86	103·32	−32·46	4·62	Karwar.	
26	57	63	92	8	1	40	42	36	5·2	?	?	83	·752	3·6	94	109·07	−15·07	107·84	129·19	−21·35	7·37	Cochin	Malabar.
116	55	136	21	6	2	2	15	12	5·2	?	?	81	·814	4·4	122	132·16	−10·16	102·05	116·52	−14·47	3·53	Calicut.	
64	41	76	73	36	12	7	11	42	11·3	?	?	81	·803	4·7	106	113·90	— 7·90	105·07	113·13	− 8·06	8·27	Mangalore.	
119	14	21	110	38	8	9	23	22	2·8	3·4	− 18	79	·782	4·9	108	118·30	−10·30	126·63	122·74	+ 3·89	5·31	Trivandrum	
122	108	39	17	9	3	5	4	58	4·3	?	?	82	·794	5·1	88	?	?	47·20	65·69	−18·49	2·50		
...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	43·81	43·80	+1·85	...	XI.—South India.	
?	33	83	35	27	46	70	34	18	11·7	?	?	80	·868	3·5	54	33·10	+20·90	51·07	37·00	+14·07	3·35	Pamban	Madras (South).
...	87	29	8	8	6	34	54	139	6·3	?	?	70	·753	5·4	37	43·00	− 6·00	38·93	?	?	6·46	Tinnevelly.	
?	?	46	8	9	6	13	12	127	2·7	4·2	− 36	71	·740	3·4	54	43·71	+10·29	37·53	32·69	+ 4·84	2·90	Madura.	

(*a*) Wind observations of 364 days. (*b*) Wind observations of 363 days. (*c*) Wind observations of 352 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.							Temperature of Air.									
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
Madras (South Central).	Salem	940	29·007	+·001	29·894	29·178	28·771	·407	·147	78·0	92·8	+0·2	71·2	+1·0	82·0	+0·6	21·6	106·5	55·5	51·0	31·8
	Coimbatore	1,348	28·578	+·002	29·880	28·742	28·364	·378	·144	75·5	90·4	+0·2	69·5	−0·1	80·0	+0·1	20·9	101·4	57·0	44·4	29·9
Coorg	Mercara	3,781	26·250	+·013	?	26·380	26·032	·348	·135	65·9	76·1	−0·2	61·9	+0·9	69·0	+0·4	14·2	90·0	50·3	39·7	22·6
Mysore	Chitaldroog	2,405	27·531	?	29·868	27·702	27·263	·439	·154	73·1	85·6	?	66·7	?	76·2	?	19·0	100·2	51·4	48·8	29·2
	Bangalore	3,021	26·943	−·004	29·879	27·088	26·719	·369	·138	69·4	84·1	+0·2	64·0	+0·2	74·0	+0·2	20·1	98·8	48·9	49·9	29·8
	Hassan	3,091	26·885	?	29·896	27·037	26·657	·380	·138	70·4	82·0	?	62·6	?	72·4	?	19·4	95·7	42·7	53·0	29·1
	Mysore	2,518	27·437	?	29·888	27·583	27·228	·355	·132	72·0	86·1	?	65·9	?	76·0	?	20·2	96·9	49·9	47·0	29·8
Madras (East Coast, South).	Negapatam	31	29·884	+·001	29·844	30·062	29·652	·410	·148	81·5	90·0	+0·6	76·4	+0·8	83·2	+0·7	13·6	107·3	64·7	42·6	24·2
	Cuddalore	12	29·903	?	29·844	30·098	29·641	·457	·159	79·9	90·7	?	74·2	?	82·5	?	16·5	109·4	58·3	51·1	27·9
	Trichinopoly	255	29·663	−·004	29·852	29·844	29·423	·421	·152	80·0	94·5	+0·5	74·3	+0·5	84·4	+0·5	20·2	107·2	60·4	46·8	29·8
	Madras	22	29·893	+·001	29·846	30·107	29·629	·478	·172	80·5	91·2	+0·4	74·3	−0·4	82·7	0	16·9	109·0	57·5	51·5	28·2
Madras (East Coast, Central).	Nellore	71	29·827	?	29·832	30·066	29·542	·524	·183	81·0	93·3	?	74·9	?	84·2	?	18·4	113·8	57·6	56·2	30·5
	Masulipatam	15	29·885	+·016*	29·835	30·157	29·564	·593	·205	79·9	89·9	−0·4	74·3	0	82·1	−0·2	15·7	112·7	59·2	53·5	29·3
Madras (Central)	Cuddapah	433	29·476	?	29·851	29·699	29·199	·500	·171	80·7	94·8	+0·3	74·0	−0·3	84·4	0	20·8	112·3	53·3	59·0	33·6
	Kurnool	923	28·981	?	29·856	29·209	28·695	·514	·179	77·7	92·8	−0·4	70·3	−0·3	81·6	−0·3	22·4	109·8	45·6	64·2	34·4
	Bellary	1,475	28·437	+·011	29·867	28·651	28·163	·488	·178	76·6	91·9	−1·0	69·6*	−0·1*	80·3*	−0·6*	21·4*	104·7	50·9	53·8	31·2†
Madras (East Coast, North).	Rajahmundry	112	29·781	+·017	29·831	30·050	29·443	·607	·216	78·8	91·8	−0·3	73·7	−0·3	82·8	−0·3	18·1	113·1	56·9	56·2	29·9
	Cocanada	26	29·858	+·015	29·819	30·132	29·489	·643	·230	79·1	88·5	+0·2	74·5	−0·5	81·5	+0·2	14·0	111·9	59·0	52·9	27·0
	Vizagapatam	31	29·845	+·008	29·815	30·138	29·439	·649	·227	78·7	86·3	+0·1	76·7	−1·3	81·5	−0·6	9·5	99·3	54·4	44·9	18·7
	Gopalpur	21	29·842	?	29·803	30·129	29·447	682	·245	76·8	86·3	?	72·5	?	79·4	?	13·7	102·2	52·1	50·1	23·8
XII.—Hill Stations.																					
Baluchistan	Kachh	?	23·894*	?	?	24·090	23·590	·500	·202	56·7	71·0	?	41·5	?	56·3	?	29·5	99·0	9·0	90·0	49·7
	Pishin*	?			Not recorded.					?	80·5	?	38·2	?	59·4	?	42·3	109·1	9·9	99·2	61·9
	Quetta	5,502	24·633	+·017	?	24·885	24·341	·544	·245	57·4	74·4	+1·1	44·5	0	59·5	+0·6	29·9	96·6	15·8	80·8	46·8
	Kalat*	?			Not recorded.					51·0	77·1	?	32·6	?	54·9	?	44·5	99·3	0	99·3	65·0
	Chaman	4,311	25·660	?	?	25·984	25·321	·663	·274	66·6	80·0	?	55·5	?	67·8	?	24·5	107·0	22·6	84·4	45·2
Northern India	Leh	11,503	19·717	?	?	19·948	19·359	·589	·330	35·7	53·6	?	28·5	?	41·1	?	25·1	87·2	−11·0	98·2	44·3
	Srinagar	5,204	24·921	?	?	25·245	24·572	·673	·311	49·0	63·2	?	43·0	?	53·1	?	20·2	93·9	−3·9	97·8	40·9
	Gilgit	?	25·083	?	?	26·620	24·340	2·280	·374	58·5	73·2	?	53·6	?	63·4	?	19·5	107·6	24·9	82·7	38·7
	Cherat	?	25·683	?	?	25·943	25·355	·588	·282	63·5	75·0	?	58·1*	?	67·4*	?	18·6*	103·5	29·1	74·4	34·9
	Murree	6,344	23·827	+·010	?	24·013	23·580	·433	·251	55·8	66·2	+0·4	52·2	+1·5	59·2	+0·9	14·0	93·2	25·5	67·7	32·7
	Poo	?			Not recorded.					?	61·6	?	41·0	?	51·3	?	20·5	85·2	8·8	76·4	36·8
	Simla	7,224	23·100	+·012†	?	23·300	22·892	·408	·235	53·7	60·9	−0·6	50·1	+0·1	55·5	−0·2	10·8	83·4	25·2	58·2	24·1
	Chakrata	6,977	23·317	+·025†	?	23·519	23·090	·429	·237	44·9†	52·9†	−0·2†	41·0†	+0·5†	47·0†	+0·2†	11·9†	87·8	25·6	62·2	25·2
	Mussooree	6,705	23·542	?	?	23·745	23·326	·419	·238	55·6	63·4	?	51·4	?	57·4	?	12·0	87·8	29·0	58·8	26·4
	Ranikhet	6,069	24·093	+·020	?	24·316	23·846	·470	·247	57·7	67·3	−0·4	53·3	+0·2	60·3	−0·1	14·0	88·1	31·5	56·6	26·9
	Yatung	10,486?			Not recorded.					?	53·1	?	35·5	?	44·3	?	17·6	69·5	15·4	54·1	30·8
	Gnatong	?	19·230	?	?	19·394	18·979	·415	·211	38·6	45·5	?	31·2	?	38·4	?	14·3	63·3	11·7	51·6	28·0
	Darjeeling	7,421	22·967	−·001	?	23·168	22·767	·401	·238	51·6	57·8	−0·4	47·5	+0·6	52·7	+0·1	10·3	69·1	28·7	40·4	19·9
	Gantok	?	24·491	?	?	24·786	24·263	·523	·283	57·4	67·9	?	49·3	?	58·6	?	18·6	83·2	31·0	52·2	31·1

* Mean of 11 months. † Mean of 10 months.

I—*continued.*

in India, Burma, etc., in the year 1895—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount of year.	Rainfall.						Heaviest rainfall during year.	Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.		Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.			
170	17	49	7	20	48	40	10	4	2·9	4·4	− 34	74	·719	4·4	81	66·50	+14·50	52·41	41·44	+10·97	3·20	Salem	Madras (South Central).
...	...	24	124	10	90	89	23	5	3·2	4·8	— 33	83	·741	4·8	42	45·20	− 3·20	19·00	21·24	— 2·24	1·79	Coimbatore.	
89	22	53	48	3	5	16	65	64	7·0	5·8	+ 21	84	·542	5·1	128	137·20	− 9·20	112·10	129·37	−17·27	6·82	Mercara	Coorg.
7	5	15	64	44	11	65	121	33	9·4	P	P	70	·581	5·1	58	P	P	32·99	P	P	3·55	Chitaldroog	Mysore.
3	2	42	73	41	13	77	94	20	8·6	5·2	+ 65	78	·573	4·9	64	61·68	+ 2·32	35·99	35·86	+ 0·13	2·44	Bangalore.	
31	3	33	70	39	13	35	103	38	3·8	P	P	76	·568	5·5	56	P	P	31·64	P	P	2·31	Hassan.	
27	6	52	57	12	22	94	76	19	9·6	P	P	77	·603	5·0	52	P	P	33·07	P	P	5·17	Mysore.	
39	7	59	15	13	16	72	67	77	11·0	5·6	+ 96	77	·820	5·3	67	60·74	+ 6·26	73·98	54·66	+19·32	4·96	Negapatam	Madras (East Coast, South).
...	56	10	7	4	42	52	82	112	2·1	P	P	84	·873	3·9	60	56·80	+ 3·20	68·08	P	P	8·30	Cuddalore.	
105	50	41	2	3	6	58	79	21	5·3	5·8	− 9	72	·733	4·9	56	45·45	+10·55	42·33	32·69	+ 9·64	2·36	Trichinopoly.	
36	51	20	5	5	48	90	73	37	6·5	7·1	— 8	75	·786	5·3	75	60·53	+14·47	47·34	49·02	— 1·68	4·66	Madras.	
57	9	1	8	50	36	7	58	139	6·8	P	P	77	·801	6·4	43	44·30	− 1·30	26·93	P	P	2·80	Nellore	Madras (East Coast, Central).
37	89	38	6	21	41	19	45	69	6·6	7·0	— 6	81	·837	4·9	50	55·24	− 5·24	42·89	43·52	− 0·63	4·40	Masulipatam	
10	3	36	61	67	11	55	81	41	?	?	?	67	·694	4·5	55	46·00	+ 9·00	30·55	34·18	− 3·63	3·28	Cuddapah	Madras (Central).
155	10	7	45	5	8	24	76	35	?	?	?	67	·642	4·3	60	48·93	+11·07	29·30	30·06	− 0·76	3·25	Kurnool.	
77	9	8	33	53	15	28	100	42	6·0	6·5	− 8	62	·576	5·4	38	35·00	+ 3·00	29·46	19·73	+ 9·73	4·75	Bellary.	
25	117	36	26	4	10	32	98	17	?	?	?	73	·741	5·4	67	50·58	+16·42	51·34	41·48	+ 9·86	2·96	Rajahmundry	Madras (East Coast, North).
5	80	36	7	10	12	58	86	71	8·1	P	P	76	·763	3·9	54	55·10	− 1·10	34·20	44·54	−10·34	1·94	Cocanada.	
...	24	5	1	1	2	25	245	62	2·8	2·9	− 3	76	·784	4·7	46	64·36	−18·36	38·86	46·47	− 7·61	4·00	Vizagapatam.	
14	94	8	5	5	34	85	19	101	12·0	9·6	+ 25	82	·768	1·9	57	61·35	− 4·35	47·72	50·72	− 3·00	4·15	Gopalpur.	
																						XII.—Hill Stations.	
81	21	23	47	29	5	24	87	46	?	P	P	53	·244	1·1	22	P	P	7·59	P	P	0·90	Kachh. (*a*)	Baluchistan.
			Not	rec	orde	d.			?	P	P	?	?	?	13	P	P	5·32	P	P	1·18	Pishin.	
283	3	1	...	14	28	12	11	13	2·6	4·1	− 37	60	·302	1·6	21	22·45	− 1·45	7·84	10·89	− 3·05	0·78	Quetta.	
...	55	...	3	...	271	2	...	3	P	P	P	?	?	?	13	P	?	3·86	P	P	0·60	Kalat,† (*b*)	
...	9	13	76	91	57	80	27	12	6·6	P	P	42	·259	2·2	12	P	P	3·41	P	P	0·74	Chaman.	
5	10	83	28	17	64	87	54	16	2·4	2·0	+ 20	52	·130	4·4	8	P	P	2·37	P	P	0·26	Leh (*c*)	Northern India.
112	18	13	28	80	57	15	16	26	5·1	P	P	86	·349	4·9	58	P	P	2·44	P	P	2·37	Srinagar.	
			Not	rec	orde	d.			?	P	P	54	·273	4·2	12	P	P	4·28	P	P	0·87	Gilghit.	
72	140	4	...	40	35	4	7	63	13·0	P	P	51	·325	3·5	34	P	P	20·91	P	P	2·38	Cherat.	
72	41	19	23	92	7	9	9	93	8·7	6·8	+ 28	52	·252	3·9	77	67·56	+ 9·44	55·53	56·29	− 0·76	4·25	Murree.	
200	14	13	33	31	15	22	22	14	?	?	?	?	?	3·8	30	P	P	12·44	P	P	1·75	Poo. (*c*)	
66	93	78	27	21	44	26	2	8	5·2	2·2	+136	58	·262	4·1	88	84·52	+ 3·48	66·58	64·19	+ 2·39	5·06	Simla.	
62	57	35	91	18	13	14	53	16	7·8	5·1	+ 53	64*	·291*	3·3	84	P	?	76·83	67·76	+ 9·07	5·22	Chakrata.	
3	17	35	105	33	13	15	61	83	P	P	?	67	·319	3·7	92	79·73	+ 9·27	100·74	P	P	7·40	Mussooree.	
195	16	23	19	10	12	32	42	16	3·2	2·1	+ 52	68	·349	3·9	76	77·29	− 1·29	52·93	54·44	− 1·51	4·87	Ranikhet.	
			Not	rec	orde	d.			?	P	P	?	?	?	134	P	P	45·06	P	P	1·36	Yatung.	
61	11	14	16	91	26	18	47	67	5·7	P	P	80	·203	5·4	191	P	P	127·30	P	P	3·39	Gnatong.	
63	11	58	97	30	13	42	32	17	4·8	4·1	+ 17	88	·356	6·7	118	118·14	+ 9·86	130·79	124·59	+ 6·20	7·26	Darjeeling.	
1	22	22	30	18	33	58	135	35	1·9	P	P	85	·422	5·6	160	P	P	125·41	P	P	3·30	Gantok. (*d*)	

† Mean of 10 months.

(*a*) Wind observations of 363 days.
(*b*) Wind observations of 334 days.
(*c*) Wind observations of 364 days.
(*d*) Wind observations of 354 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.							Temperature of Air.										
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
Central India	Mount Abu	3,945	26·030	0	P	26·233	25·667	·566	·207	68·1	76·0	−0·3	62·0	+0·2	69·0	−0·1	14·0	97·2	38·1	59·1	26·8
	Pachmarhi	3,528	26·439	+·013	P	26·652	26·069	·583	·195	70·2†	79·7†	+1·2†	61·3†	+0·5†	70·6†	+0·9†	18·3†	101·7	34·3	67·4	31·5†
South India	Wellington	6,200	24·254	−·004	P	24·370	24·070	·300	·124	62·5	71·5	+0·9	52·8	−0·9	62·2	0	18·6	82·7	35·2	47·5	29·3
XIII.—Extra India.																					
Ceylon	Trincomalee	12‡	29·882	P	29·820	30·093	29·665	·428	·148	83·7	88·8	P	76·9	P	82·9	P	11·8	98·0	69·0	29·0	19·3
	Colombo	40	29·901	−·007	29·867	30·014	29·760	·254	·139	83·1	87·6	P	75·7	P	81·7	P	11·9	93·5	67·0	26·5	18·6
	Galle	48	29·890	P	29·864	30·001	29·748	·253	·138	80·9	83·8	P	77·0	P	80·4	P	6·8	88·0	72·0	16·0	12·1
Persia	Meshed	3,104			Not received.					55·7	...	P	45·8	P	P	P	P	P	−11·0	P	P
	Teheran	P	25·981†	P	P	26·425	25·550	·875	·380	58·5†	70·7*	P	49·0*	P	59·8*	P	21·8	104·4	8·8	95·6	42·5
	Ispahan	P			Not received.					57·7	74·5	P	46·2	P	60·4	P	28·3	102·1	12·9	89·2	43·9
	Bushire	14	29·866	P	29·836	30·331	29·391	·940	·290	74·5	81·7	P	69·0	P	75·4	P	12·7	105·5	45·8	59·7	28·8
	Jask	P	29·861	P	P	30·238	29·368	·920	·272	78·0	85·6	P	73·0	P	79·3	P	12·6	104·2	49·3	54·9	24·9
Arabia	Muscat	P	29·858	P	P	30·278	29·385	·893	·264	79·8	82·4	P	77·9	P	80·2	P	4·6	99·5	58·7	40·8	14·7
	Baghdad*	220?	29·539	P	P	29·947	29·024	·923	·375	62·8	79·9	P	57·1	P	68·5	P	22·8	113·1	30·0	83·1	40·2
	Aden	94	29·822	−·009	29·848	30·066	29·501	·565	·173	81·4	88·2	−0·6	78·2	+0·9	83·3	+0·1	10·0	101·8	69·9	31·9	18·4
	Perim	P	29·706	P	...	29·935	29·446	·489	·176	83·2	89·8	P	79·5	P	84·6	P	10·3	101·5	72·0	29·5	16·6
Afghanistan	Kabul†	P			Not received.					55·2	75·4	P	45·4	P	60·4	?	30·1	103·1	17·4	85·7	49·6
Central Asia	Kashgar	P	25·670	P	?	26·360	25·260	1·100	·589	49·8	65·8	?	42·7	P	54·3	?	23·1	99·5	0·3	99·2	45·4
Arabian Sea Islands.	Amini Devi	15			Not received.							P	...	P	...	P	...	...	...	...	...
	Minicoy	10	29·942	P	29·877	30·056	29·792	·264	·137	81·5	87·6	P	*79·1	P	83·0*	P	8·1	94·8	72·8	22·0	15·4
Africa	Zanzibar	73	29·996	P	29·996	30·179	29·825	·354	·151	78·9	83·6	P	76·7	P	80·2	P	6·9	89·6	70·7	18·9	12·2

* Mean of 10 months. † Mean of 11 months. ‡ Erroneously given as 75 feet in the Monthly Weather Reviews for 1894 and 1895.

I—*concluded.*

in India, Burma, etc., in the year 1895—concluded.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity of year.	Mean vapour tension of year.	Mean cloud amount of year.	Rainfall. Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.	Heaviest rainfall during year.	Station.	Meteorological Province or District.
39	28	70	10	21	11	118	35	33	8·8	7·0	+ 26	55	·378	2·8	49	53·19	−4·19	50·25	66·87	−16·62	5·03	Mount Abu	Central India.
91	11	13	25	25	15	54	113	18	8·6	5·2	+ 65	62†	·453†	3·8	75	80·37	−5·37	67·13	78·23	−11·10	6·06	Pachmarhi.	
245	22	14	10	5	6	32	15	16	2·8	3·3	− 15	69	·393	4·2	82	88·63	−6·63	48·85	52·98	− 4·13	2·96	Wellington	South India.
																						XIII.—Extra India.	
36	12	78	5	15	5	197	2	15	4·9	?	?	75	·872	3·8	87	?	?	72·70	59·54	+13·16	5·58	Trincomalee	Ceylon.
...	58	49	13	23	16	115	72	17	8·7	7·2	+21	74	·844	5·1	105	?	?	89·04	90·04	− 1·00	4·31	Colombo	
126	9	38	12	5	...	...	28	147	6·0	?	?	89	·936	3·9	121	?	?	76·22	88·20	−11·98	3·14	Galle	
				Not	rec	orded.			?	?	?	?	?	3·0	18	?	?	8·55	?	?	1·03	Meshed	Persia.
263	7	8	1	2	3	21	7	12	3·8†	?	?	54†	·266†	2·1†	25	?	?	9·45	?	?	0·90	Teheran.(*a*)	
51	29	24	7	19	7	91	48	89	4·5	?	?	77	·418	2·2	15	?	?	5·31	?	?	0·70	Ispahan.	
...	40	93	53	65	16	14	6	77	7·7†	8·2	−6	66	·592	?	12	?	?	4·71	13·34	− 8·63	1·64	Bushire.(*b*)	
41	52	41	94	56	10	3	13	55	11·8	?	?	70	·702	2·5	10	?	?	3·96	?	?	0·70	Jask.	
...	12	36	91	42	20	18	72	67	3·7	?	?	72	·758	1·7	17	?	?	8·05	?	?	1·70	Muscat(*c*)	Arabia.
92	69	22	9	17	26	8	9	49	3·2	?	?	66	·370	0·6	15	?	?	5·77	?	?	0·84	Baghdad.(*d*)	
34	...	69	154	24	29	44	6	3	11·2	11·5	−3	73	·783	4·6	5	?	?	1·48	3·79	− 2·31	0·54	Aden.*	
14	10	27	122	84	12	28	39	28	13·5	?	?	72	·818	4·7	2	?	?	0·57	?	?	0·18	Perim.(*b*)	
...	63	16	142	19	20	14	55	5	?	?	?	?	?	1·1	17	?	?	11·02	?	?	1·34	Kabul†(*e*)	Afghanistan.
310	12	13	9	...	2	2	6	7	2·8	?	?	?	?	4·2	7	?	?	2·99	?	?	0·63	Kashgar(*f*)	Central Asia.
...	...	...	...	...	...	...	...	...	...	...	?	...	...	...	...	...	...	...	...	...	...	Amini Devi.	Arabian Sea Islands.
22	43	48	15	9	7	32	113	72	11·2	?	?	80	·853	4·9	95	?	?	51·99	?	?	2·81	Minicoy.(*f*)	
3	53	42	12	71	114	64	4	2	6·2	?	?	84	·824	5·5	76	?	?	40·23	?	?	2·96	Zanzibar	Africa.

* Wind observations of 363 days.
† Mean of 11 months.
(*a*) Wind observations of 324 days.
(*b*) " " of 364 "
(*c*) Wind observations of 358 days.
(*d*) " " of 301 "
(*e*) Wind observations of 334 days.
(*f*) " " of 361 "

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 84

Meteorological Province.	Station.	Elevation of bar. cistern above sea-level in feet.	Pressure.						Temperature of Air.								
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45°Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.
Burma Coast and Bay Islands.	Port Blair	...	29·859	29·763	·096	29·808	−·001	29·800	87·1	77·5	9·6	94·8	70·6	24·2	84·3	84·5	81·2	+ 0·6
	Rangoon	...	·878	·759	·119	·821	−·011	·799	89·9	72·9	17·0	103·1	59·8	43·3	81·8	85·7	79·3	+ 0·5
	Diamond Island	...	·877	·777	·100	·824	−·012	·800	84·9	77·1	7·8	90·5	70·2	20·3	82·3	82·4	79·9	+ 1·0
	Akyab	...	·888	·781	·107	·835	−·002	·798	86·0	71·5	14·5	96·1	50·7	45·4	81·0	83·2	78·1	− 0·4
Assam	Silchar	...	·803	·674	·129	·740	+·002	·796	86·3	67·2	19·1	99·8	45·5	54·3	77·9	83·6	75·7	+ 0·2
	Sibsagar	...	·578	·439	·139	·508	−·011?	·801	81·5	65·7	15·8	96·8	41·9	54·9	74·3	80·7	72·5	+ 0·2
	Dhubri	...	·779	·649	·130	·713	+·007	·783	83·0	68·2	14·8	95·0	49·8	45·2	75·9	81·4	74·2	+ 0·1
Bengal and Orissa	Chittagong	...	·804	·692	·112	·748	−·010	·783	85·3	68·8	16·5	95·6	49·1	46·5	79·9	81·9	76·3	0
	Narayangunge	...	·854	·740	·114	·797	+·006	·766	86·0	70·5	15·5	96·8	49·4	47·4	80·1	83·5	77·9	+ 0·1
	Calcutta (Alipore)	...	·850	·735	·115	·789	+·005	·756	86·7	70·3	16·4	107·2	47·4	59·8	80·9	84·7	78·1	+ 0·2
	Saugor Island	...	·845	·735	·110	·787	+·003	·756	85·7	73·6	12·1	95·3	50·7	44·6	81·5	83·2	78·5	+ 0·2
	Burdwan	...	·769	·646	·123	·705	0	·752	88·8	70·2	18·6	112·8	48·1	64·7	81·3	86·3	78·5	− 0·5
	Berhampore	...	·803	·686	·117	·742	+·010	·757	87·6	69·4	18·2	110·4	47·1	63·3	80·9	85·8	77·7	− 0·3
	False Point	...	·853	·747	·106	·799	−·004	·762	85·9	71·8	14·1	108·5	47·2	61·3	82·8	83·0	77·6	− 0·1
	Cuttack	...	·784	·663	·121	·727	−·005	·749	91·0	72·6	18·4	115·8	50·5	65·3	82·4	87·7	80·2	+ 0·1
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·851	27·750	·101	27·800	+·003	·745	84·5	65·7	18·8	108·6	43·0	65·6	77·9	81·3	74·1	+ 0·3
	Patna	...	29·675	29·558	·117	29·615	0	·751	87·4	68·6	18·8	110·0	44·1	65·9	80·7	85·3	77·1	− 0·1
	Darbhanga	...	·702	·577	·125	·638	+·004	·758	85·8	68·7	17·1	102·0	46·3	55·7	79·3	84·5	76·6	− 0·1
	Allahabad	...	·545	·430	·115	·483	+·003	·748	90·0	67·2	22·8	114·7	42·0	72·7	82·3	88·2	77·8	+ 0·1
	Lucknow	...	·482	·371	·111	·423	−·002	·749	88·9	64·0*	24·9*	114·5	40·9	73·6	81·0	86·6	75·8*	?
Upper Sub-Himalayas	Dehra Dun	...	27·631	27·543	·088	27·578	+·004	·774	81·1	60·6	20·5	106·4	38·2	68·2	88·2	77·1	69·6	− 0·8
	Roorkee	...	28·950	28·845	·105	28·890	+·002	·745	86·7	62·4	24·3	113·7	37·1	76·6	77·1	84·5	73·7	− 0·4
	Meerut	...	29·097	·996	·101	29·040	0	·745	87·5	64·5	23·0	113·7	41·1	72·6	78·3	84·8	75·2	+ 0·2
	Lahore	...	·127	29·035	·092	·074	0	·750	89·5	61·7	24·8	117·1	35·4	81·7	78·9	88·2	76·3	+ 2·8
	Ludhiana	...	·026†	28·931†	·095†	28·971†	?	·753†	87·9	64·6	23·3	116·8	37·4	79·4	79·2	85·8	75·4	+ 1·2
Indus Valley and N.-W. Rajputana.	Peshawar	...	28·755	·653	·102	·697	+·005	·795	85·9	60·1	25·8	114·0	32·3	81·7	76·3	83·9	72·0	+ 1·3
	Mooltan	...	29·407	29·318	·089	29·355	0?	·742	93·4	66·6	26·6	120·7	36·6	84·1	81·4	91·4	79·1	+ 2·7
	Jacobabad	...	·654	·533	·121	·596	+·005	·728	96·8	66·7	30·1	123·2	31·7	91·5	86·5	94·5	80·7	+ 2·0
	Kurrachee	...	·869	·784	·085	·825	+·001	·786	87·4	69·9	17·5	110·6	45·3	65·3	81·7	84·0	77·6	+ 0·4
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·442	28·340	·102	28·386	+·009	·775	91·0	65·7	25·3	115·5	38·0	77·5	82·5	88·3	77·1	+ 1·1
	Ajmere	...	·268	·164	·104	·212	+·002	·775	89·5	65·1	24·4	113·4	36·1	77·3	80·3	88·0	76·7	+ 1·8
	Deesa	...	29·417	29·297	·120	29·353	+·006	·768	95·1	66·5	28·6	117·2	38·2	79·0	85·1	92·9	80·3	+ 0·6
	Nowgong	...	·095	28·988	·107	·038	0	·749	89·6	65·9†	23·7†	115·5	42·0	73·5	81·1	86·8	76·4†	?
	Agra	...	·294	29·188	·106	·232	?	·745	90·5	67·8	22·7	115·6	41·4	74·2	82·8	88·0	78·5	+ 0·5
Deccan	Belgaum	...	27·395	27·289	·106	27·341	−·002	·768	84·3	64·1	20·2	101·2	49·9	51·3	77·6	80·1	72·7	+ 0·1
	Sholapur	...	28·316	28·181	·135	28·251	+·002	·764	92·5	68·5	24·0	110·1	47·2	62·9	83·5	89·8	79·4	+ 0·3
	Poona	...	·070	27·956	·114	·016	+·003	·780	89·8	64·8	25·0	108·9	45·5	63·4	81·0	86·3	76·4	+ 0·6
	Akola	...	·952	28·814	·138	·880	0	·760	93·5	67·8	25·7	113·9	42·2	71·7	83·9	91·5	80·3	+ 1·2
	Buldana	2,132	27·764	27·652	·112	27·705	+·001	·753	87·8	67·5	20·3	109·1	49·4	59·7	80·7	85·6	77·2	+ 0·2
	Khandwa	...	28·839	28·710	·129	28·772	+·008	·762	92·2	67·5	24·7	113·9	42·1	71·8	82·7	90·1	79·1	+ 1·1
	Hoshangabad	...	·866	·739	·127	·800	?	·777	89·9	67·3	22·6	113·4	42·8	70·6	80·7	88·3	78·0	−0·1
	Nagpur	...	·842‡	·715‡	·127‡	·776‡	?	·748‡	92·5‡	69·0	23·5‡	114·2‡	47·2	67·0‡	83·0	89·1	80·6‡	?

* Mean of 11 months, June wanting. † Mean of 11 months, April wanting. ‡ Mean of 11 months, March wanting.

II.

Stations in India, Burma, etc., in the year 1895.

Temperature, Wet-bulb.				Vapour Tension.					Humidity.					Cloud.				Rainfall.		Station.	Meteorological Provinces.
Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Total rainfall for the year.	Heaviest rainfall during the year.		
74·8	78·8	78·5	77·3	·829	·914	·895	·879	−·007	88	78	76	80	−2	6·2	6·4	6·3	+1·0	...	...	Port Blair .	Burma Coast and Bay Islands.
70·6	75·6	76·0	74·1	·729	·810	·779	·773	−·011	89	75	65	76	−3	5·1	5·8	5·5	+0·1	...	...	Rangoon.	
73·4	75·9	75·8	75·0	·779	·816	·810	·802	−·010	83	74	73	76	−4	5·8	6·0	5·9	+1·1	...	...	Diamond Island.	
69·5	76·1	77·4	74·3	·716	·855	·876	·816	+·045	90	79	76	82	+3?	5·1	4·8	5·0	+0·4	...	...	Akyab.	
66·1	72·2	73·5	70·6	·655	·737	·707	·700	−·011	94	76	61	77	−2	5·8	5·7	5·8	+0·5	...	...	Silchar . .	Assam.
65·3	71·0	73·4	69·9	·653	·739	·755	·716	+·014	98	85	72	85	+1	?	?	?	?	...	...	Sibsagar.	
66·6	71·0	72·6	70·0	·662	·717	·702	·694	+·005	92	78	65	78	0	4·4	4·1	4·3	+0·4	...	...	Dhubri.	
67·8	73·9	74·5	72·1	·692	·774	·769	·745	−·003	95	74	70	80	0	5·2	4·7	5·0	+0·5	...	...	Chittagong .	Bengal and Orissa.
67·9	73·7	73·9	71·8	·680	·768	·728	·725	−·030	87	73	63	74	−3	5·2	5·4	5·3	+0·8	...	...	Naryangunge.	
68·1	72·9	73·0	71·3	·691	·730	·677	·700	−·055	89	67	56	71	−7	3·9	4·4	4·2	−0·2	...	...	Calcutta (Alipore).	
70·8	75·6	75·7	74·1	·747	·830	·811	·796	−·029	87	75	69	77	−3	5·8	5·6	5·7	+1·0	...	...	Saugor Island.	
67·6	71·9	72·4	70·6	·677	·686	·634	·666	−·026	87	62	50	66	−3	4·2	4·8	4·5	+0·1	...	...	Burdwan.	
66·4	72·9	73·3	70·9	·642	·731	·678	·684	−·008	84	67	55	69	−5	3·9	4·6	4·3	−0·6	...	...	Berhampore.	
70·5	75·7	75·8	74·0	·755	·809	·810	·792	−·003	94	71	70	79	−2	5·1	5·3	5·2	+0·5	...	...	False Point.	
70·1	73·7	74·1	72·4	·724	·735	·680	·711	−·012	87	65	53	68	−2	3·6	4·3	4·0	−0·1	...	...	Cuttack.	
58·5	66·1	66·6	63·7	·437	·517	·490	·481	−·001	63	54	46	54	−3	4·9	5·9	5·4	+0·8	...	...	Hazaribagh .	Gangetic Plain and Chota Nagpur.
65·3	71·4	71·5	69·4	·622	·655	·610	·630	+·005	83	61	50	65	0	3·3	3·7	3·5	−0·6	...	...	Patna.	
66·6	71·4	72·4	70·1	·662	·695	·661	·672	0	89	67	55	70	−1	3·0	2·8	2·9	0	...	...	Darbhanga.	
63·2	70·2	70·7	68·0	·568	·607	·546	·573	−·001	81	54	42	59	−2	3·3	3·7	3·5	+0·3	...	...	Allahabad.	
60·7	69·9	70·9	67·2	·489*	·616	·576	·543*	?	77*	57	46	59*	?	3·6	4·0	3·8	+0·3	...	...	Lucknow.	
56·8	63·8	65·1	61·9	·447	·503	·499	·483	?	79	60	52	64	?	3·6	4·3	4·0	+0·1	...	...	Dehra Dun .	Upper Sub-Himalayas.
59·5	66·7	68·3	64·8	·513	·551	·509	·524	+·031	85	58	42	60	+2	2·9	2·7	2·8	−0·2	...	...	Roorkee.	
61·2	66·7	68·2	65·4	·543	·537	·497	·526	+·013	83	54	42	60	+2	2·6	2·9	2·8	−0·2	...	...	Meerut.	
59·0	66·4	69·0	64·8	·476	·523	·484	·494	+·009	72	52	37	53	+2	2·3	2·6	2·5	−0·1	...	...	Lahore.	
60·3	66·8	68·3	65·1	·515	·530	·491	·512	+·011	78	52	40	57	−1	3·3	3·9	3·6	+0·2	...	...	Ludhiana.	
54·3	62·9	64·9	60·7	·398	·450	·417	·421	−·005	70	48	36	51	−2	2·6	3·8	3·2	+0·1	...	...	Peshawar . .	Indus Valley and N.-W. Rajputana.
59·7	67·9	71·9	66·5	·463	·552	·564	·526	−·008	65	48	37	50	−4	1·7	1·7	1·7	0	...	...	Mooltan.	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	2·0	2·5	2·3	+0·4	...	...	Jacobabad.	
65·6	72·8	74·2	70·8	·618	·723	·745	·695	+·032	77	64	62	67	0	2·7	2·5	2·6	−0·6	..	...	Kurrachee.	
59·5	66·8	68·3	64·9	·475	·491	·467	·478	+·011	69	43	35	49	−1	3·3	4·3	3·8	+0·4	...	...	Jeypore . .	East Rajputana, Central India and Gujarat.
59·3	67·0	70·0	65·4	·477	·525	·509	·510	+·031	71	50	40	54	+3	2·2	3·0	2·6	−0·2	...	...	Ajmere.	
60·3	67·6	68·3	65·4	·486	·466	·384	·445	−·040	67	38	26	44	−1	2·4	2·5	2·5	−0·9	...	...	Deesa.	
61·9	68·5	69·3	66·5	·546†	·556	·504	·546†	?	81†	53	42	60†	?	3·3	4·4	3·9	−0·2	...	...	Nowgong.	
61·9	68·9	69·9	66·9	·519	·553	·513	·529	+·027	71	49	40	53	+2	2·8	3·3	3·0	+0·3	...	...	Agra.	
61·9	66·3	67·5	65·2	·536	·512	·524	·524	+·001	88	56	53	66	+3	4·0	5·0	4·5	−0·2	...	...	Belgaum . .	Deccan.
62·2	68·4	69·6	66·7	·496	·515	·477	·496	+·008	70	46	36	51	+1	3·7	5·6	4·7	−0·2	...	...	Sholapur.	
60·9	66·5	67·8	65·0	·506	·482	·452	·481	−·008	80	47	40	55	+2	4·0	4·8	4·4	−0·2	...	...	Poona.	
62·4	69·7	70·9	67·7	·521	·551	·492	·521	+·036	73	48	36	53	+2	3·2	4·5	3·9	+0·2	...	...	Akola.	
60·2	65·9	66·4	64·2	·447	·465	·420	·444	−·031	65	44	37	49	−4	3·5	4·7	4·1	0	34·64	2·55	Buldana.	
60·7	68·2	69·3	66·0	·480	·528	·468	·492	−·008	68	48	35	51	−2	3·3	4·4	3·9	+0·5	...	...	Khandwa.	
62·1	169·3	71·1	67·5	·522	·597	·562	·561	+·039	75	57	45	59	+ 3	3·5	4·3	3·9	+0·3	...	...	Hoshangabad.	
62·7	71·6	73·3	69·2	·515	·653	·635	·601	+·082	70	58	48	59	+ 6	3·9	5·3	4·6	+0·1	...	...	Nagpur.	

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 84

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.									
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.
Deccan—*concld.*	Nagpur (Sanitary Commissioner's Office).	...	28·873	28·745	·128	28·809	P	29·771	92·9	68·9	24·0	114·9	47·0	67·9	83·8	90·0	80·2	P
	Jubbulpore	...	·529	·410	·119	·467	P	·743	88·8	64·5	24·3	112·3	38·5	73·8	79·9	85·7	75·7	+0·3
	Saugor	...	·108	·001	·107	·052	P	·751	88·3	67·1	21·2	113·4	42·6	70·8	80·9	86·1	76·9	P
	Raipur	...	·901	·775	·126	·835	+·012	·736	90·7	69·6	21·1	113·0	47·9	65·1	82·9	88·3	79·7	+0·7
	Sutna	...	·808	·698	·110	·749	+·006	·746	88·3	66·4	21·9	113·1	41·2	71·9	82·0	86·1	76·5	+0·5
	Hyderabad (Deccan).	...	·215	·090	·125	·152	P	·769	89·5	68·9	20·6	108·7	47·3	61·4	81·8	86·7	78·5	P
West Coast	Bombay	...	29·885	29·783	·102	29·830	+·007	·807	85·8	74·9	10·9	93·8	60·8	33·0	80·9	83·0	79·6	+0·1
	Ratnagiri	...	·808	·708	·100	·753	+·007	·801	87·5	73·8	13·7	96·8	61·1	35·7	83·9	83·8	79·7	+0·5
	Karwar	...	·894	·789	·105	·837	+·005	·813	86·5	73·5	13·0	94·8	56·6	37·2	81·9	84·2	79·4	+0·8
	Cochin	...	·932	·842	·090	·883	−·001	·820	88·5	75·4	13·1	95·1	68·4	26·7	83·8	85·5	81·2	+0·9
South India	Salem	...	·007	28·865	·142	28·944	−·008	·813	92·8	71·2	21·6	106·2	55·4	50·8	83·6	88·8	80·1	+0·6
	Mysore	...	27·444	27·323	·121	27·384	P	·798	86·1	65·9	20·2	97·1	50·0	47·1	77·8	83·0	75·2	P
	Mercara	...	26·258	26·164	·094	26·220	P	P	76·1	61·9	14·2	90·2	50·5	39·7	70·0	72·0	68·0	+0·3
	Bangalore	...	·950	·837	·113	·899	−·008	·790	84·1	64·0	20·1	99·0	48·8	50·2	76·1	81·2	73·4	+0·1
	Hassan	...	·891	·788	·103	·845	P	·808	82·1	62·6	19·5	95·7	42·7	53·0	76·0	79·2	71·6	P
	Chitaldroog	...	27·533	27·415	·118	27·476	P	·785	85·7	66·7	19·0	100·4	51·2	49·2	78·2	83·3	75·6	P
	Trichinopoly	...	29·667	29·525	·142	29·604	−·007	·788	94·5	74·3	20·2	107·3	60·6	46·7	86·4	91·6	82·7	+0·7
	Madras	...	·900	·786	·114	·847	+·005	·798	91·2	74·3	16·9	109·1	57·3	51·8	85·9	86·2	81·5	−0·2
	Bellary	...	28·445	28·308	·137	28·379	+·013	·779	90·9*	69·6*	21·3*	104·2	50·9	53·3	82·2*	88·0*	79·1*	P
	Vizagapatam	...	29·857	29·744	·113	29·796	+·004	·767	86·2	76·7	9·5	98·8	54·5	44·3	83·5	84·2	P	P
	Cocanada	...	·869	·748	·121	·809	P	·771	88·4	74·4	14·0	111·7	59·0	52·7	84·0	86·3	80·9	P
Hill Station, Baluchistan.	Quetta	...	24·640	24·562	·078	24·593	+·015	P	74·5	44·5	30·0	96·8	15·9	80·9	66·0	70·7	58·6	+0·4
Hill Stations, Northern India.	Leh	...	19·716	19·633	·083	19·680	+·018	P	53·7	28·5	25·2	87·2	−11·0	98·2	42·9	49·7	40·4	+0·1
	Srinagar	...	24·934	24·848	·086	24·883	P	P	63·1	42·9	20·2	93·9	− 4·1	98·0	53·1	61·8	52·7	P
	Murree	...	23·853	23·820	·033	23·829	+·006	P	66·2	52·2	14·0	93·3	25·4	67·9	61·0	61·9	58·1	+1·3
	Chamba	3,005	26·891	26·803	·088	26·854	P	P	77·9	56·5	21·4	105·2	32·9	72·3	67·4	73·9	65·2	−0·1
	Kallang	10,087?	20·808	20·749	·059	20·785	+·024	P	53·1	31·0	22·1	81·7	−9·0	90·7	44·5	49·0	39·7	−1·3
	Simla (Ridge)	...	23·122	23·074	·048	23·090	+·010	P	60·9	50·0	10·9	83·4	25·2	58·2	56·4	57·8	54·7	−0·1
	Chakrata	...	·336	·278	·058	·299	+·013	P	P	P	P	P	P	P	P	P	?	P
	Ranikhet	...	24·112	24·043	·069	24·065	+·015	P	67·3	53·3	14·0	88·2	31·5	56·7	62·5	63·6	59·3	−0·6
	Katmandu	4,388	25·571	25·498	·073	25·533	P	P	77·0	53·8	23·2	90·2	30·2	60·0	67·4	70·7	63·6	−1·4
	Darjeeling	...	22·984	22·907	·077	22·944	+·001	P	57·8	47·5	10·3	69·1	28·7	40·4	54·3	55·1	52·0	+0·2
Hill Stations, Central India.	Mount Abu	...	26·046	25·974	·072	26·006	−·005	P	76·0	62·0	14·0	97·2	38·1	59·1	71·7	74·0	68·5	+0·1
	Pachmarhi	...	·455	26·365	·090	·407	+·015	P	79·6†	61·4†	18·2†	101·7	34·3	67·4	74·4†	76·9†	69·3†	P
	Chikalda	3,642	·342	·251	·091	·294	+·009	P	79·2	64·6	14·6	100·0	42·4	57·6	73·1	77·4	71·6	+0·4
	Wellington	...	24·261	24·187	·074	24·224	0	P	71·5	52·9	18·6	82·7	35·4	47·3	67·2	66·4	60·9	−0·2
Hill Station, Southern India.	Muscat	...	29·868	29·789	·079	29·829	P	P	82·3	77·9	4·4	99·5	58·7	40·8	81·2	81·6	80·0	P
Extra India	Aden	...	·832	·717	·115	·771	−·007	29·796	88·1	78·2	9·9	101·9	69·7	32·2	84·2	85·6	82·6	+0·6
	Perim	...	·713	·600	·113	·653	P	P	89·9	79·5	10·4	101·6	72·0	29·6	86·1	86·5	83·8	P
	Minicoy	...	·954	·858	·096	·902	P	29·837	87·6	P	P	94·8	72·8	22·0	83·9	84·4	P	P
	Zanzibar	...	·998	·889	·109	·944	P	·943	83·7	76·7	7·0	89·6	70·7	18·9	79·9	83·1	80·0	?
	Port Victoria (Seychelles).	15	·984	·900	·084	·943	P	·881	82·2	76·4	5·8	86·4	69·7	16·7	80·6	81·1	79·1	P

* Mean of 11 months, May wanting.

† Mean of 11 months, March wanting.

II—*concluded.*

Stations in India, Burma, etc., in the year 1895—concluded.

Temperature, Wet-bulb.				Vapour Tension.					Humidity.					Cloud.				Rainfall.		Station.	Meteorological Province.
Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Total rainfall for the year.	Heaviest rainfall during the year.		
62·6	69·8	71·2	67·9	·517	·572	·541	·539	P	71	50	41	54	P	3·1	4·3	3·7	P	...	...	Nagpur (Sanitary Commissioner's Office),	Deccan—*concld.*
60·8	67·8	68·5	65·7	·518	·552	·485	·519	+·017	82	55	43	60	+ 3	2·9	3·9	3·4	−0·6	...	...	Jubbulpore,	
60·1	67·1	68·1	65·1	·460	·513	·483	·485	P	66	50	42	53	P	2·9	3·7	3·3	P	...	...	Saugor,	
63·9	70·1	70·6	68·2	·544	·587	·532	·554	+·007	73	52	42	56	− 1	3·4	4·4	3·9	−0·1	...	...	Raipur,	
61·3	67·9	68·1	65·7	·516	·533	·484	·511	+·054	76	49	41	55	+ 5	2·7	3·4	3·0	−0·2	...	...	Sutna,	
65·1	70·5	71·3	69·0	·588	·614	·581	·595	P	82	58	48	63	P	3·5	4·6	4·1	P	...	...	Hyderabad (Deccan),	
70·5	74·3	75·4	73·4	·698	·770	·783	·750	−·029	79	72	69	74	− 3	3·9	3·7	3·8	−0·5	...	...	Bombay . .	West Coast.
69·7	74·5	75·9	73·4	·684	·737	·792	·737	−·002	80	64	69	71	− 1	4·0	4·5	4·3	+1·3	...	...	Ratnagiri,	
70·8	74·5	75·6	73·7	·729	·761	·775	·756	−·007	88	70	67	76	− 2	3·4	4·0	3·7	−0·1	...	...	Karwar,	
73·0	76·6	77·5	75·7	·785	·821	·837	·814	0	89	71	69	76	− 4	4·0	4·7	4·4	−0·3	...	...	Cochin,	
69·1	73·6	74·3	72·3	·692	·698	·657	·682	−·010	90	61	50	67	− 1	4·6	5·7	5·2	+0·8	...	...	Salem . .	South India.
63·2	68·3	68·4	66·6	·554	·578	·515	·549	P	86	61	48	65	P	5·1	5·8	5·5	P	...	...	Mysore,	
59·8	64·1	64·7	62·9	·495	·535	·532	·520	−·016	88	74	70	76	− 4	5·3	6·4	5·9	−0·6	...	...	Mercara,	
61·8	66·6	66·9	65·1	·533	·550	·583	·528	−·004	88	61	49	66	− 1	4·5	5·2	4·9	+0·3	...	...	Bangalore,	
59·7	66·1	68·5	64·1	·487	·534	·510	·511	P	84	60	53	67	P	5·3	6·3	5·8	P	...	...	Hassan,	
61·1	67·6	67·7	65·4	·477	·550	·490	·506	P	72	58	44	58	P	4·7	5·6	5·2	P	...	...	Chitaldroog,	
70·0	74·1	74·6	72·9	·684	·680	·633	·666	−·031	80	59	45	60	− 4	4·0	5·0	4·5	−1·3	...	...	Trichinopoly,	
P	75·9	76·5	75·3	P	·767	·787	·801	+·028	P	63	64	74	+ 1	5·1	4·7	4·9	0	...	...	Madras,	
63·6*	68·4*	69·5*	67·2*	·521*	·527*	·495*	·514*	P	72*	48*	38*	53*	P	5·5	7·1	6·3	+1·4	...	...	Bellary,	
72·7	75·2	75·8	74·6	·764	·777	·794	·779	+·010	83	67	67	72	+ 4	4·5	4·7	4·6	+0·7	...	...	Vizagapatam,	
71·3	75·1	75·7	74·0	·739	·762	·756	·752	P	85	66	60	71	P	3·7	3·5	3·6	P	...	...	Cocanada,	
39·9	51·7	52·8	48·1	·218	·260	·236	·246	−·007	70	41	33	48	− 2	1·5	2·6	2·0	−0·2	...	...	Quetta . .	Hill Station, Baluchistan.
P	33·2	37·6	P	P	·139	·157	P	P	P	46	43	P	P	4·7	5·4	5·1	−0·3	...	...	Leh . . .	Hill Stations, Northern India.
42·0	49·0	54·5	48·5	·296	·360	·422	·359	P	93	75	63	77	P	4·5	4·8	4·7	P	...	...	Srinagar,	
43·6	50·4	51·4	48·5	·217	·285	·301	·268	−·013	52	50	52	51	− 5	4·2	4·6	4·4	−0·3	...	...	Murree,	
52·5	57·8	60·8	57·0	·380	·400	·411	·397	−·001	77	57	48	61	+ 2	4·5	5·7	5·1	+0·3	44·52	3·33	Chamba,	
28·3	36·5	38·4	34·3	·161	·178	·169	·169	−·013	82	55	47	61	− 1	4·6	5·7	5·2	−0·4	20·42	1·98	Kailang,	
44·0	48·3	49·8	47·4	·246	·277	·299	·274	−·022	63	56	59	59	− 1	4·7	5·5	5·1	+0·1	...	...	Simla (Ridge),	
P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	?	P	P	...	...	Chakrata,	
49·0	54·3	55·1	52·8	·325	·358	·368	·350	+·009	75	61	60	65	+ 1	4·1	4·3	4·2	−0·2	...	...	Ranikhet,	
52·3	60·3	62·1	58·2	·413	·469	·480	·454	+ 009	90	67	60	73	+ 2	4·8	5·3	5·1	+0·6	57·35	2·60	Katmandu,	
46·2	51·8	52·4	50·2	·316	·377	·384	·36	+·008	90	85	84	86	+ 2	7·5	7·7	7·6	+1·1	...	...	Darjeeling,	
54·0	59·6	61·0	58·2	·344	·388	·405	·379	+·021	60	51	48	53	+ 2	3·1	3·3	3·2	−0·6	...	...	Mount Abu .	Hill Stations, Central India.
56·1†	62·7†	63·6†	60·8†	·415†	·448†	·445†	·436†	P	74†	54†	51†	60†	P	3·8	4·7	4·3	+0·2	...	...	Pachmarhi,	
58·1	61·9	63·4	61·1	·420	·437	·432	·430	−·004	69	57	49	58	− 1	4·4	5·5	5·0	+0·8	50·69	4·13	Chikalda,	
50·8	58·4	58·9	56·0	·358	·401	·424	·394	+·004	88	61	66	72	0	5·4	6·8	6·1	+0·4	...	...	Wellington . .	Hill Station, S. India.
69·9	74·3	74·9	73·0	·649	·780	·796	·742	P	67	72	72	70	P	1·6	1·6	1·6	P	...	...	Muscat . .	Extra India.
72·0	75·5	74·7	74·1	·707	·777	·719	·735	−·013	73	66	58	66	− 2	3·7	1·5	2·6	0	...	...	Aden,	
65·6	77·0	77·1	73·2	·451	·813	·812	·693	P	45	66	64	59	P	3·2	3·2	3·2	P	...	...	Perim,	
74·6	77·7	77·7	76·7	P	·868	·860	P	P	P	75	73	P	P	4·8	5·2	5·0	P	...	...	Minicoy,	
73·6	75·5	75·9	75·0	·793	·828	·801	·807	P	86	81	71	79	P	4·7	4·2	4·5	P	...	...	Zanzibar,	
72·1	75·2	75·2	74·2	·733	·803	·798	·778	P	80	77	75	78	P	6·3	6·2	6·3	P	95·25	6·10	Port Victoria (Seychelles).	

G. I. C. P. O.—No. 34 Meteor.—17-10-96.—385.

EXPLANATION OF PLATES.

PLATE I.—A chart of India showing the 11 meteorological provinces and 51 districts of India.

PLATE II.—A chart of India showing the variation of the rainfall of the months of January and February 1895 from the normal. This chart and the three following charts have been prepared to illustrate the data given in Table XIII. These charts are drawn up in the same manner as the rainfall chart (Plate V) in the Monthly Weather Reviews of the year 1895.

PLATE III.—A chart of India showing the variation of the rainfall of the months of March to May 1895 from the normal.

PLATE IV.—A chart of India showing the variation of the rainfall of the months of June to October 1895 from the normal.

PLATE V.—A chart of India showing the variation of the rainfall of the months of November and December 1895 from the normal.

PLATE VI.—Chart showing the tracks of the more important cyclonic storms of 1895 in the Indian area during the south-west monsoon, a brief summary of which is given on pages 604 and 605.

Zinco, S. I. O., Calcutta.

Explanation.

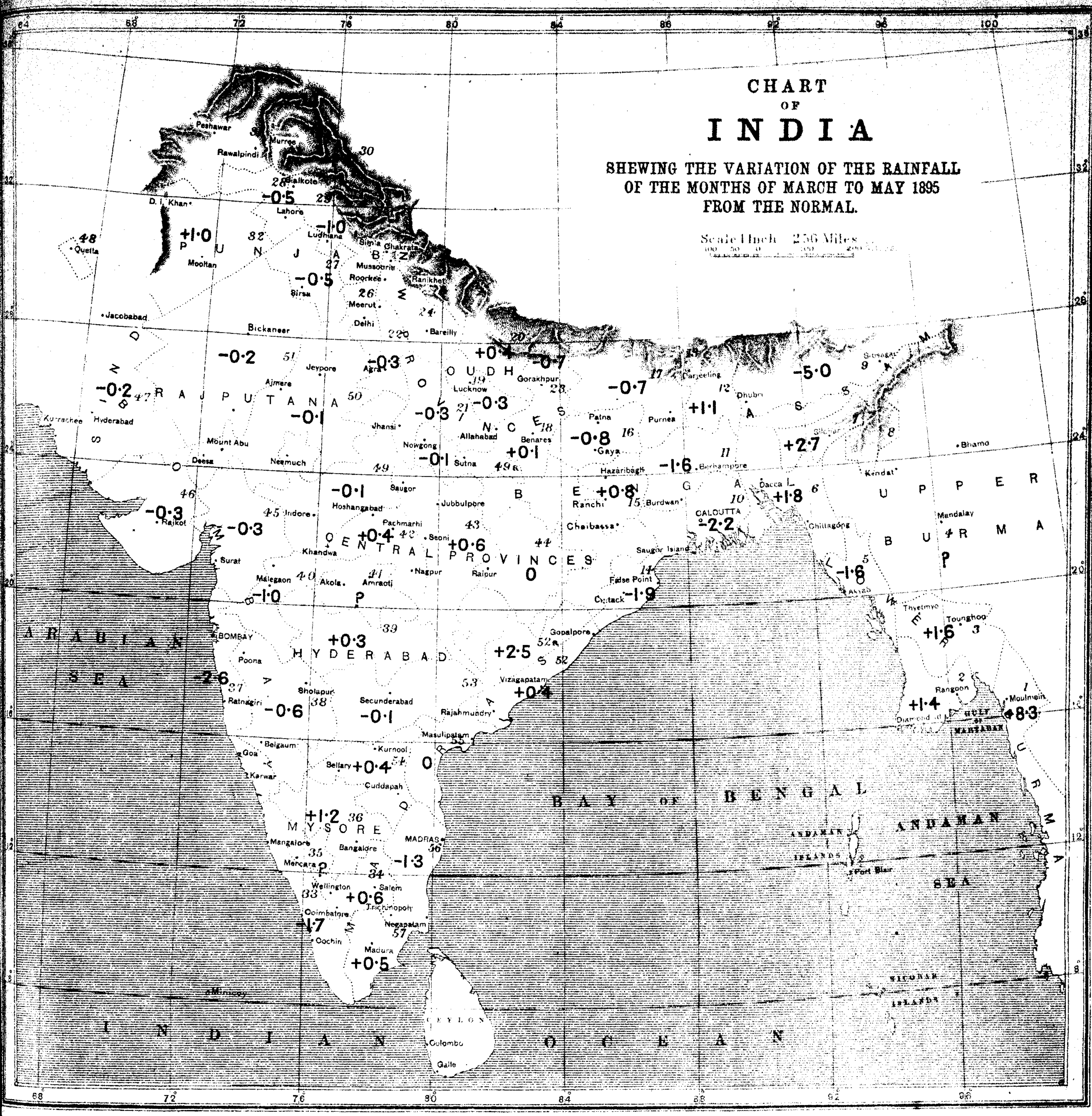
The name of the districts can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting figures.

1. Tenasserim	14. Behar (South)	27. Punjab (West)	40. Gujarat
2. Lower Burma	15. Do. (North)	28. Malabar	41. Kathiawar
3. Central do.	16. North Western Provinces (East)	29. Madras (South Central)	42. Sind
4. Upper do.	17. Oudh (South)	30. Coorg	43. Central India (East)
5. Arakan	18. Do. (North)	31. Mysore	44. Rajputana (East) Central India (West)
6. Eastern Bengal	19. North Western Provinces (Central)	32. Konkan	45. Rajputana (West)
7. Assam (Surma)	20. Do. do. (West)	33. Bombay Deccan	46. East Coast (North)
8. Do. (Brahmaputra)	21. Do. do. (Submontane)	34. Hyderabad (North)	46(a). Do. do. (a)
9. Deltaic Bengal	22. Punjab (South)	35. Khandeish	47. Hyderabad (South)
10. Central do.	23. Do. (Central)	36. Berar	48. Madras (Central)
11. North do.	24. Do. (Submontane)	37. Central Provinces (West)	49. East Coast (Central)
12. Orissa	25. Do. (Hill Districts)	38. Do. (Central)	50. East Coast (South)
13. Chota Nagpore	26. Do. (North West)	39. Do. (East)	51. Madras (South)

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North Do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do, East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
32. West do.
33. Malabar
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
47. Sind
48. Baluchistan Hills
49. Central India, East.
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. East Coast, North
52(a). Do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. East Coast, Central
56. East Coast, South
57. Madras, South



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Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

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9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North Do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
32. West do.
33. Malabar
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
47. Sind
48. Baluchistan Hills
49. Central India, East
49a. Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. East Coast, North
52(a). Do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. East Coast, Central
56. East Coast, South
57. Madras, South

No ..., Wr. 1—Aug 96—395. Litho., S. I. O., Calcutta.

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or – sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

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10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North Do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
32. West do.
33. Malabar
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
47. Sind
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. East Coast, North
52(a). Do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. East Coast, Central
56. East Coast, South
57. Madras, South

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

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10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
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17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North Do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do, East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
32. West do.
33. Malabar
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
47. Sind
48. Baluchistan Hills
49. Central India, East
49a. Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. East Coast, North
52(a). Do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. East Coast, Central
56. East Coast, South
57. Madras, South

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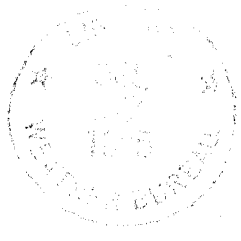

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